Field Book

of W. L. Jepson.

No. 12

Field - Book

of

Willis L. Jepson

- 1904 -

- If lost finder please return by mail to Box 103, Berkeley, California and receive reward.

St. Helena, May 28, 1904.

No. 2427. Rhus diversilobia T. & G. Poison Oak. Spring Mt. Creek (York Creek). Shady ground.

No. 2428. Brodiaea. = Tritelia laxa Benth. Free portion of filaments 1 line long, the stamens opposite inner segments longer - coalescent higher. Color pale blue or lilac blue. Tube narrow, expanding into sub-campanulate throat. Hellerian species probably. York Creek. = B. laxa Wats.

No. 2429. ~~Godetia~~ Clarkia amoena. G. Don. Decidedly protandrous. When the anthers shrivel the stigmas spread cross-like and expand so that they appear very broad. Plentiful on disintegrating rock hillsides. York Creek.

St. Helena

- Jack Lyman says Madrona crowds out Black Oak on his fallow places. Madrona seeds freely; comes up under protection of Black Oak and finally overtops it and kills it. Plenty of Tan Oak on his place. Also original Redwood trees seven and eight feet through - too inaccessible for the original cutting and lumbering in the valley.

- Frank Pellet says Tan Oak was shipped from here by rail about ten years ago.

- Wine tanks are made of redwood.

May 28, 1904.

- One of the liveliest of editors is Miss _____, of the St. Helena Sentinel. Quick, lively at repartee, making excellent points, in a way careless but not slouchy, she is a very animated person to fall in with. If she knows you, she has some jest, joke, story or conundrum. For instance in passing, she calls: What is the difference between a man and a hen? You can't tell of course! Well a man can lay an egg on a red-hot stove without burning his feet but a hen can't"!

St. Helena, May 28, 1904.

- Each time that I come to Napa Valley I renew my ecstasies of delight over its pleasures of wooded hill and valley floor.
- The Douglas Spruce is on the floor of the valley in gravelly spots with the Yellow Pine and Black Oak. The Yellow Pine is on the top of the ridge. So is the Douglas Spruce. But the latter is also everywhere between - at least on favored slopes.

St. Helena to Burke's Sanatorium

- Had a glorious ride to Burke's via Calistoga and the Petrified Forest. The hills were magnificent and the vistas ever-shifting. Along Porter Creek the cutworpillars have stripped some Live Oaks and many Oregon Ashes. The latter look very odd with the white midribs of the compound leaves sticking out all over the trees. The Garry Oak is at the Petrified Forest - 2 fine trees at the station - and on down to Burke's. In this range are more species of oak trees than at any other point or range in California: Black Oak, Coast Live Oak, Blue Oak, Garry Oak, Maul Oak. The Tan Oak is not far away and is in this region. Valley Oak - Seven in

St. Helena to Burke's Sanatorium (Sonoma Co.)

all. I think no other region has so many. Possibly the Santa Cruz Mountains could show as many. The Scrub Oak is in this region too. Eight!
- Near the road and not far from Mark West Springs a big Live Oak (agrifolia) grows on a shoulder of the hillside. Large trees are often found in such situations. Also noted in a flat in a cañon bottom Cerasus demissa 25 and possibly 30 ft. high.
- Calycanthus occidentalis in flower, its odor is like the odor of pumice, a by-product in wine-making. Mrs.

May 29, 1904

Lewelling calls it Spice Bush.
- Heuchera micrantha in fl., its flowers smell like ants or a colony of ants at very short range!!

- No. 2430. Streptanthus secundus Greene. Flowers mostly secund but not always so. Sometimes a single fl. will bend out of the raceme in the opposite way to the majority, sometimes a third or half. Mark West Creek (Burke's)

- On this trip with my brother-in-law Frank Pellet, the banker of Saint Helena.

St. Helena to Howell → Mountain, June 3, 1904.

— Foothills —

No. 2431. ~~Godetia~~ Clarkia purpurea ssp. quadrivulnera. Dry soil among dead or semi-dead grasses.

No. 2432. Calochortus luteus Dougl. = C. superbus Purdy. Petals with eye-spot. = var. citrinus Wats.

No. 2433. Hypericum concinnum Benth. Petals in full anthesis completely reflexed! Stamens spreading widely, the long styles strongly divaricate. Stamens in 3 very distinct clusters, united at base by an undivided portion, 25–30 stamens in each cluster. Sepals distinct. Petals minutely toothed at apex, the margin with scattered black gland-dots.

No. 2434. Brodiaea. Stamens closely approximate by their anthers in centre; staminodia erect!! B. coronaria Jepson.

No. 2435. Douglas Oak. Trees 10 to 20 ft. h., mostly diseased and hanging with grey "Spanish moss".

No. 2436. Orthocarpus attenuatus Gray.

No. 2437. Madia sativa Molina

☞ All the above, 2431 to 2437, on lower slopes, dry & grassy, 1 to 2 miles from Glue Bridge.

No. 2438. Clarkia concinna Greene. On land-slide.

No. 2439. Pickeringia 1 to 8 ft. h. montana Nutt. Stamens distinct! inserted on calyx-tube low down but distinctly perigynous!! Ovary stipitate, silvery with short fine white hairs. Banner with a yellow spot at base of blade. — Howell Mt.

(Probably about 2600 ft. where collecting was done.)

Howell Mt., Napa Range.

No. 2440. Layia (=Madia nutans (Greene) Keck) Howell Mt. Rays 4 or 5 trefoil-shaped.

No. 2441. Godetia. 3 to 12 or more in h. Petals concolor, or pale with a spot of darker color. Howell Mt.

No. 2442. Eschscholtzia californica Cham. On the rocky country. Howell Mt.

No. 2443. Cryptantha. With preceding. C. flaccida Greene.

No. 2444. ~~Gilia~~ (Linanthus) androsaceus with preceding.

No. 2445. Ranunculus californicus var. callidulus. Petals 5! Marshy spot.

No. 2446. Pentstemon heterophyllus Lindl. Lower pair of stamens longer than upper, their anthers standing just above those of the others in mouth of tube, their filaments coalescent with narrow

June 3. 1904. Napa Co.

part of tube below! Upper pair of stamens free. Anthers of all with ciliate margins to the valves. Rocky country. Howell Mt.

No. 2447. Ceanothus cuneatus Nutt. 6 to 8 ft. h. Horns very prominent. Branches right-angled divaricate. Howell Mt.

No. 2448. Adenostoma fasciculatum Howell Mt. Stamens 15. Anthers turned down in the disk in the bud, the stamens released successively. One flower with 6 petals!

No. 2449. Diplacus*. Howell Mt.

No. 2450. Helianthella. Chaparral, Toland House to Crystal Springs. Rays 1 in. or more long! See next p. 16.

No. 2451. Ceanothus Jepsoni Greene. Horns 6, 3 outer much longer than inner, tending to approximate over inner.

* Mimulus aurantiacus Curt. Det. A. L. G.

Toland House to St. Helena town via Crystal Springs, June 3, 1904.

(Howell mt.)

Nos. 2451 a, b etc. See pp. 18 and 34.

No. 2452. ~~Cornus glabrata Bth.~~ Calochortus ← or → white but exactly like the lutens it was among in markings, eye-spot, gland etc.

[No 2450. Helianthella. Rays 12 to 14. Pappus consisting of 2 very delicate and minute bristles seen under a lens, one at each angle! New sp? Dif. from Vaca Mts. plant! See preced. p.

– Mrs. Angwin says that there is Tan Oak with the Redwood on the slope towards Pope Valley, and that bark was hauled out a number of years ago to supply Napa.

← no. 2452. Calochortus venustus Dougl. (Discarded)

Calistoga, June 4, 1904.

No. 2451 a. Collinsia tinctoria Bth. Keller ranch.

"The Big Tree wood is a very pretty wood but is very brash and rots in the ground more easily than Redwood. It is redder than Redwood." – Frank Pellet, St. Helena, one time a merchant in timbers.

Berkeley. June 9. 1904

- A party of children came into the Berkeley Station from the hills with their arms full of flowers. One girl had her arms around a bunch of Brodiaea laxa - about 400 plants! This was about May 14.
- Brass Buttons first plant to come up on the reclaimed mud flats about Oakland!

- Mr. Deane of Australia, an associate of Maiden, visited Berkeley today, June 7. He looked over our collection of Acacias and Eucalypti with interest. As to the height of Australian Eucalypti he said none had been measured in excess of 320 feet and that some doubtless exceeded 340 feet. Mr. Hager.

Berkeley, June 9. 1904.

manager of the General Electric Co. S.F. was his cicerone. Hager was suprised when I told him that an Blue Gum was now looked upon as a valuable timber tree. He told a story of the eastern U.S. Gum Tree that warped so badly when cut that one had to go out on the lot and gather it up with a fish net.

Vacaville, June - July, 1904.

- May and early June were very hot. The latter part of June and early July were extraordinary cold. A few days ago it was cold all night and very cool in the day. Within the last week the fog has come three times to the tops of the Vaca Mts, and this phenomenon happened in June two or three times. The fog was over the Sacramento River and drifts of it were scattered in the sky above the Sacramento Valley. The North wind blew a great deal in June, first south, then veering to a trade, then north again. The difference in the two winds in their effects on vegetation is very marked. The north wind is a hot penetratingly dry wind that retards growth very decidedly. This wind at an inopportune day, "punished" the wheat

Vacaville, July 12, 1904.

and barley crop - i.e. decreased the yield by one half to one-third. The cool winds which have just been blowing from the opposite direction favor growth. The orchardists are glad to have it - the growth will be good and the fruit large.

- Frank Mckevith scarifies the head of fruit trees to hasten the covering of wounds. The time to cover is decreased by one-half.
- "White Weed" here is Sida hederacea. It hurts the growth of orchard trees very decidedly. Its tap-roots go down to water.

Convolvulus arvensis is a dire pest here, in certain places. Persistent cultivation with a weed-cutter

Vacaville, July 12, 1904.

before new shoots get near the surface, each time will kill it. Lee Wilson says pasturing chickens on it, by means of portable fences, will kill it out.

- Mr. Harbison says White Weed (Alkali Mallow) does not seed.

Trip to Bohemian Club Grove.
August 20, 1904.

- Fine Madrona on hill near RR station at Novato. Windblown typ. & little like Monterey Cypress. Also trees on "hill islands" in the marshes near same place.
- Pennyroyal is very luxuriant in dry bed of lake at Midsummer Jinks Grove. The odor in the night at the "Burial of Care" was very strong.

Berkeley, August 24, 1904

– Luther Burbank has two hybrids between the California Walnut and the Eastern Black Walnut. One he calls the Paradox Hybrid, is a thrifty grower, an shy bearer, – samples stand in front of his place in Santa Rosa. The Royal Hybrid is hardier, grows well in the East, bears abundantly nuts of the hard-shelled variety.

– Pinon (monophylla) is in the Texas region – and how far west? The Indians like the nuts of this better than those of any other pine says Hall. They are not so oily, more farinaceous. They also dis-

Berkeley, August 24, 1904.

tinguish between Monophylla and Quadrifolia – but not by the leaves.

– Gorrill (Hill) says there is a Nut Pines and Pine Nut. Both in the Santa Clara River Region. There are about six miles from each other. The Coulter Pine is there. The nuts are collected by roasting the cones and sold for $2.00 a sack.

Capt. Nauer, U.S.A., says. Native Philippine woods are very hard. Difficult to log and to saw. The usual process of sawing, one man above and another man below the log, a necessary method on account of hardness. Oregon Pine being laid down in Philippines more cheaply than native wood can be had – at least at all sea-ports. – Berkeley, Dec. '04

Vacaville, Aug 29, 1904.

- Soil samples
No. 1., at ½ ft. dark loam.
No. 2, at 3½ ft., clayish loam
No. 3, at 5½ ft., adobe or black clay.
These collected in Peach orchard, Vacaville, in west part of town. Samples given to Longbridge, June, 1905.
Also. No. 4. Wild Horse Canon, at 4 ft., early apple orchard. Vaca Mts.

If you trees you'll recollect,
Stop a moment and reflect
Spruces pendant, firs erect,
That's a rule that is correct.

Berkeley, Sept. 1904.

"That most underout astronomer Laplace, regretted that he was not present at the creation because he had various improvments to suggest. More than one anatomist since his day has wondered why Nature gave the birds the best eye she ever made, and left mankind to toil and spin at short range with an eye designed for distant vision." - Atlantic Mo. 94; 544.

- International Congress of Arts and Sciences, St. Louis, 1904:- "Was overwhelming in its comprehensiveness and complexity. It is not unjust to the sober intellectualism of this Congress to call its most direct general consequence a sentiment. For sentiment may both quicken

Berkeley

His seeker after knowledge and gain breadth and luminousness to his work. Those who attended experienced not so much an extension of knowledge as a new sense of its range and possibilities. - Outlook, 78; 349.

- Simonds, A.B. Collected a little somewhere about 1887 or later. One of his good finds was a new station for Myriophyllum hippuroides at Clear Lake (Fl. W. Mid. Cal. p. 339.)

September, 1904.

- Polygonum Hydropiper (Water Pepper) - leaves peppery to taste, bring tears to eyes - C.E. Jenny, in Pac. Rur. Press, Sept. 17, 1904.

- W.W. Mackie says that at Laramie a year ago there came a heavy snowstorm one day in September. The street trees in full foliage suffered severely - branches being broken to the ground and whole trees being practically destroyed. He says that in the Black Hills region they are using Lodgepole pine for ties by treating them with creosote. Formerly they attempted to use them untreated. They lasted a year!

Berkeley

– Mr. Ralph Hosmer, Bureau of Forestry, has left S. Calif where he had charge of the U.S.-Calif. cooperative work to go to Hawai as Chief Forester. I liked him for a certain primitive sturdiness. His speech was refined but mixed with provincial phrases. Anderson, who is in Charge of Eucalyptus work, wanted to make up a set of questions to put to farmers, etc. H. did not want him to do it alone: So he said: "I'll come around and we'll fuss up something together"!

Sept. 1904.

– Mr. Goodrich says loco weed does not make horses vicious, only peculiar, strange in action, unreliable.

– Jack Lyman says: "Pin Oak" (Wislizenii?) is the name of a small scrub oak at St. Helena with small leaves and pointed acorns. Three scrub oaks at Harbin Springs, one has fuzzy leaves and blunt acorns." Blue Pine is his name for Digger Pine, Laurel Oak for Maul Oak. Says fine Tan Oak trees 3 ft. diam. in his cañon, at St. Helena; also some at the old Church.

– Umbellularia Californica = Myrtle in Oregon, Peppermood in Humboldt, Pepper Tree in North Coast Ranges, Laurel & Bay Tree at S.F. Bay.

Berkeley

- Miss Charlotte Hoak and Tan Oak :- Two fine groves - finest ever seen by her father. One near Observatory Ridge, Signal Station, west of Ukiah, on main ridge, S.E. of Low Gap. Trees 4 or 5 ft through, low, bark 4 or 5 in. thick. Other grove between Anderson Valley and Comptche, a large grove at "Moore's Opening" - this latter may have been cut. Bark thick - not thin as in the redwoods!

Sept. 26. 1904.

- For four days, previous to today, it rained 4 in. + over at Vacaville! Beating all records. (In the middle of the month it had been hotter here than ever before.) Now the grass is starting. A long dry spell is probably before us. And this seedling lot will be killed out! The next stand will not be as good, since the most vorile and germinable seeds respond first. [- The storm gave 6 in. all together! and 7.41 in. at Thurbers! And no sign of a dry spell yet - Oct. 5, 1904.)

Vacaville

- Henry Villiard, who recently died was a cousin of E. W. Hilgard. Financier, journalist, friend of presidents he had a marked career. His biography in 2 vols just published. His name was Hilgard. He changed it arbitrarily on coming to this country I believe.

- Very very warm today. The hills are burnt brown showing what happens when the sun does its perfect work.

- I used a tool today that spoke very loud - a plumber's wrench. Wish I could move some students in that way!

Sept 14, 1904.

- Valley Oak in Vaca Valley near Murray's Corner. 14 ft 5 in. at 4½ ft, in road.
- Cottonwoods in Weldon Canon, a plenty
- On ridge, between head of Weldon and Wild Horse; - Pickeringia montana nutt. abundant, Scrub Oak and Scrub Wislizenii, Ceanothus cuneatus and C. sorediatus, plenty Adenostoma fasciculatum, Cercocarpus*; - grove of Black Oak on ridge at School. Fine grove of Digger Pine and Black Oak 200 feet below knife crest on Napa side, near head of Weldon grade

* C. parvifolius.

Solano Co.

Wild Horse Cañon

Vaca Mts.

No. 2451b. Cornus glabrata Bth. fruit blue! 8 ridges, thread-like! very noticeable in fresh fruit.

- Thermopsis, seldom sets fruit on account of insects
- Cottonwood near head of Wild horse - and on down.
- The Chapparral between the Summit Ridge and Wild Horse is heavy, lots of Scrub Oak (dumosa) and Bear Brush (Garrya) frequent.

No. 2452a. Psoralea macrostachya Wild Horse.

No. 2452b. Lotus crassifolius Greene Wild Horse.

No. 2452c. Sphacele calycina = Lepechinia. Wild Horse

No. 2453. Ceanothus sorediatus H. & A. 1800 ft. in Weldon Cañon. C. sorediatus H. & A.

No. 2454. Black Oak in lower part of Weldon Cañon.

No. 2455. Juncus patens Mey. Det. F.V.C. Wild Horse, beside dry stream in bottom of cañon

Sept. 15, 1904.

- Lots of Scrub Oak in the dense high chapparal. Also Bear Brush, Christmas Berry & Laurel.
- Silky narrow-leaved willow 18-25 ft. high!
- Thermopsis, 9 ft. h!
- Mountain Balm = very glossy green leaves!

Soil sample, 4 ft. below surface on bank of creek, in this cañon, at first ranch, taken and turned over to college of Agriculture.

No. 2456. Iris. Flat in bottom of Wild Horse Cañon. I. macrosiphon Torr.

No. 2457. Rosin Weed - Summit Ridge Calycadenia truncata DC. not far from Schoolhouse, - just at top of road from Weldon Cañon to Summit. 4 or 5 rays, purple spot in throat of marginal corolla. "Extra material" 3-rayed & pure yellow.

No. 2458. Chlorogalum, perhaps pomerid. Wild Horse

Suisun Marshes

- Went today to Cygnus and was taken out west 1½ mi to the Ibis Gun Club. The men - Capt. Holmberg and a young fellow - were very attentive and helpful. Went out into the ponds where the ducks fed. The water is high - knee deep. Ordinarily only 18 in. The Potamogeton pectinatus was floating everywhere on the surface of the ponds where the ducks had been feeding. Mixed with the greenish or brownish tops were white stems from the lower part of the plant.

Oct. 13, 1904

These are long rootstocks, very slender as rootstocks but very thick as compared with the other stems, also very fragile. These white stems are found laid along the surface of the bottom or penetrate the mud. In order to get at the tubers it was necessary to shovel up soil from the bottom. So the young fellow got out into the water and got very wet. The shovel-fuls were landed in the boat and I picked it over. I found the tubers plentiful - occur in the "solid" mud and

Suisun Marshes

not in the black inky mush-like stuff. The tubers were of all sizes, formed on the ends of stolon-like or runner-like stems which are even formed on the ascending stems at nodes and then sent downwards! All stages were found. Even old ones isolated in the mud which had been for some time vibrating I should say. This species is the only thing in the ponds in the form of a pondweed, and the only aquatic seed-plant I saw. It fills the ponds so densely

Oct. 13, 1904

that it is impossible to get a boat through. That was four weeks ago. Now the ducks have cleaned it out so well that we had no trouble in going anywhere. The effect of disturbed areas - where ducks have been feeding - is something like the rooting over of a new field by hogs when the vegetation is young and shining white roots are exposed. The tubers are very sweet and have a distinct nutty or chestnut flavor.

Suisun Marshes

- O.B. Cromwell, of S.P. Co at Cygnus station says: "The tall round tule growing only in soft mud is "Bull Tule". The one with the sprangly flowers is "Common Tule". Then there is the "Nut Tule", on account of the shape of its flower clusters. The geese eat the roots and clean out areas of 5, 10 + 20 acres or even more. Many of the duck ponds, now used by the hunters have been made in this very way. The geese keep feeding as long as they can get at the

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roots and they can get at the roots as long as they have something to pull against, that is as long as they can pull against the bottom. Sometimes these "geese wallows" become 4 or 5 ft. deep, as the waters recede the geese work down. They will clean the roots out completely or the next year they get at the tender shoots and complete the job."

= S. robustus Campestris Britton
Scirpus ~~robustus~~ ~~Pursh~~.

✓ No. ✓ 2459. Bull Tule. "The roots are sweet and succulent like Sugar Cane. They are eaten by the Indians - Pah Utes - I have

Suisun Marshes

seen the Indian Squaws wade out into the mud where this grows, up to their hips in mud and water, and gather great quantities for food." - O. B. Cromwell, Suisun Marshes.

Scirpus ~~californicus~~ ~~occidentalis~~ Chase.

No. 2460. Common Tule. As I understood my informant mentioned above - he regards the roots of this as being more succulent and juicy than those of Bull Tule. The latter are coarser and tougher.

No. 2460 a. Scirpus ~~californicus~~ rubiginosus Britt.

No. 2460 b. Psoralea macrostachya

No. 2460 c. Cicuta Bolanderi Wats.

No. 2460 d. Aster

No. 2460 e. Scirpus heterophyllum Greene.

No. 2460 f. Typha

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No. 2461. Potamogeton pectinatus, described six pp. back. p 37

Mr. Orr says: "that the Canvasback also eats the "seeds" (nutlets) of the Pondweed, but especially the Broadbill, who scoops them up from the surface as they float on the water. When the Canvasback leaves the marshes he resorts to the bay shores - Richardson's Bay and the shallows of San Pablo where he feeds on clams - small diving for them. The Greek fisherman and others take advantage of this habit of the fowl and snare them with nets stretched beneath the water over their feeding grounds. The Canvasback dives, gets his head caught in the

Suisun Marshes

net, and is strangled to death beneath the water. These birds you see in the market, fine looking to the eye, and not a shot in them. Thus may you know in the first place that the bird has been strangled to death (and no strangled bird is as good as one shot) and in the second place that he is "fishy" and unfit for the epicure's table.

In early days, '76, I went to the marshes with the market hunters, in a sloop, - no rail in those days, - and before dawn the captain of the sloop and I went to one of the ponds. As we approached the ducks flew away by thousands. We let them

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go - for if shot at in the early morning they will return to a pond. But I ensconced myself in a blind, the boat just fitted into it, my companion went off to another pond and I put out my decoys. Soon the ducks began to fly back at the first chance, as soon as there was plenty of light I began to shoot. By two o'clock I had littered the pond with 327 ducks - mostly widgeon.

That afternoon as the captain prepared his ducks for market I got four choice ones ready for our meal. I filled each prepared duck at the vent with a table-spoonful of salt and three

Suisun Marshes

of water. Shook them up to dissolve the salt, sewed up the vent and tied the neck, and cooked them 15 minutes. When they were done the salt, water, blood and fat had amalgamated and formed a rich gravy that burst out as I stuck the knife into it.

The special flavor of the canvasback - the nutty essence - seems concentrated in the skin so that after being cooked 18 or 20 minutes, he comes out of the oven with a delightful fragrance that assails the nostrils in the most delightful way. This is

October 13, 1904.

my way of cooking ducks. There is no sense in putting in a bunch of celery. The idea is that since the duck in the East U.S. feeds on celery it is a good plan to put celery into them when cooking, but the celery merely absorbs the juices without giving anything out.

Will, the Captain and I sat down to our ducks. I had brought along French bread and a case of claret. I had also cooked some potatoes. And what a meal we had!

2000 Canvas Back will clear the tubers out of a pond in a night; the sound

Berkeley

of their eating (for they are voracious eaters) is like the guzzling of hogs! Then they go out in the morning. Let them go! They go out in a body. Shoot them as they come back in small parties!"

Nov. 14, 1904.

Why do not Redwood seeds germinate in the woods? 25% or more have good ~~seed~~ embryos in seed. The embryo is large, has two large cotyledons, and nearly fills the seed there being but a small layer of Endosperm. There must be light and soil! Heinz says he found mould, leafage, twigs 6 in to a foot deep beneath the trees in Sherwood Valley. But where the light gets in and there is some soil then seedlings grow. It is the same with Tan Oaks.

Tocoloma to

- Clumps of Laurel as big as a house "shaven off" by the wind, the windward side defoliages in places, and the limbs straight below. At a distance the clumps mistaken for a great weathered rock, moss-covered.
- Reasons for barren hills - long hot dry summers, seedlings not being able to establish root system to tide over summer; winds; grass drying up ground. The transpiration being great. Other places too wet in spring or winter, too dry in summer. Also failure of seed distribution.

Nov. 19, 1904.

Live Oak, Hazel (corylus cal. nos.), Laurel - cut off by the wind - Planted Monterey Cypress a long row not disturbed.

No. 2462. Rhamnus californica typica
Tomales Bay.
C B Wolf

Marin Co.

Bear Valley

About Olema are fine clumps of Bay Laurel. One of on top of a little hill (rocky point) had its picture taken. It was so big in the sense of bulky and spread out over the ground and yet compact! And smoothed off all over like a great unusual shaped loaf of. Another one below it - with an over-hanging roof on one side, closed in on the sides and cattle standing under!. These between Tocaloma and Olema on the balds west. In a cañon creek near, too, we saw some rather large and interesting Laurels (Umbellularia)

Nov. 19, 1904.

very broad, and branchlets drooping all over, in contrast to usual form with tips all erect. This form rather marked

On road to Bear Valley we find some very good specimens of Douglas Spruce, 150-175 ft. high. There are good Live Oak trees at the old Shafter place - 60 ft. high. healthy and strong, and a Tan Oak, 75 ft. high.

The scrub Hazel & Laurel favor the rock outcrops on the balds - birds may bring the seed there - Jays, says, Kellogg, student Bot. 4, carry the Laurel fruits.

- The Laurel in the valley of the Shafter Ranch are big trees and there are a lot of

Bear Valley.

them. Tops symmetrical big and round, or ~~crown~~ with wind-rifted crown, straggling bunches of rifted spars above crowning the new crown below which is now rounded out like the former outline above.

- Fine sprouts from decayed laurel trunks, forming a circle and forming ~~the~~ symmetrical oval crowns 28 ft. high. These peculiar trees are on the slope at entrance of Bear Valley, stand alone and are noticeable from Olema on opposite side.

Nov. 19, 1904.

- Mr. Tower says Plantago lanceolata is called Buck Plantain in Kansas where it is also a pest. This and Hypochaeris radicata cover fully 25 to 35 per cent of the valley and lower slopes hill land!! The rosettes are admirably adapted for crowding out other species - grasses and native plants.

- Trip to Mt. Vision (Bot. 4): Blue Blossom in flower, an aggressive species. Gaultheria Shallon, its ~~flowers~~ corollas resembling the perianths of the Lily of the valley.

No. 2463. Myrica Californica
Common enough.

Mt. Vision, Inverness, Marin Co.

No. 2464. Chimaphila. 5-8 ft. high. Odor disagreeable but on hot day extremely so! Stamens 11, 12, in 2° fls. counted. Female inclucres with 3 styles and 2 to 36 stamens!!

No. 2465. Viola canina adunca Sm. Monstrosities Reversions. Open hill top. Heavy season's rains. Fls with 5 spurs! One with 6! very monstrous. Reversion to 2, 3, 4, 5 common. All regular in shape but not in size. Normal spur the largest, usually 2 lateral spurs if one. Lower petals with or without and small.

Nov. 20, 1904.

2 extra spurred on a plant usually all spurred but normal fls. may be on same plant as spurred flowers. One flower without spur, but having a mere gibbosity. Flowers with one spur dif. as to petals, form and position of same, noticeably so with 2 spurs also, less so with 3 and 4 spurs, and practically regular with 4, 5, & 6 spurs.

= Eriophyllum staechadifolium, monstrous heads.

Redwoods – mature their cones in Oct. & Nov. Bolton brought a great lot of cones from Willits, Nov. 10th. Many of the cones were opened, whilst others were just ready to open. These last were quite large, they had not shriveled up in drying and were of a most beautiful light-brown color. I never knew before that Redwood cones could be so beautiful. They came from the tops of the tall trees and were not the low lateral-branch cones one so commonly sees. They had subulate foliage-branchlets. – Nov. 25

St. Helena

-Digger Pine, holds its cones four or five years, forming great bunches in the top of the tree. Noted three or four trees that had begun to bear at 15-16 years of age. Two seedlings, each with 13 cotyledons. Digger Pine is reproducing very freely all through this district. Is infested by the same pine Rust as Bishop Pine, namely Peridermium Kini, apparently.

- What is the difference between a law and a banana, asks Dorris. A law can be repealed but a banana can't. This is only partly a botanical joke.

Dec. 26, 1904.

- Big-leaf Maple, on river-bank, road to Sanatarium, clump of five or six trees, 75 ft. high. Bark fissured into ribbon-like furrows which interlock or or interweave ..... Not splitting accor into small plates."

- A Mississippi River Captain was trying to convince a traveler as to the meaning of metaphysics. But no illustration sufficed. "See that bluff, there", said the captain, "and the holes in it. Now if you take away the bluffs and leave the holes that's metaphysics."

Berkeley

"Another stirring message came to me yesterday. At a family gathering a lady handed me a sealed note which she said that a lady in Boston had asked her to deliver. I opened it, and there was not a word in it,- not one,- only a leaf. But that leaf was laurel"- Chas. W. Elliott, in his Jubilee Year of 1904.

"To observe keenly, to reason soundly and to imagine vividly are operations as essential as that of clear and forcible expression"

"The rigorous examination for admission has one good

January, 1905

effect throughout the college course: it prevents a waste of instruction upon incompetent persons".

"Many excellent persons see great offense in any system of college rank. xxx. How many men and women perform their daily tasks from the highest motives alone,- for the glory of God and the relief of man's estate? Most people work for bare bread, a few for cake. ~~Most people work for bare bread, a few for cake~~. The college rank-list reinforces higher motives. In the campaign for character, no auxilaries are to be refused. Next to despising the enemy it is dangerous to reject allies. To devise a

Berkeley, Jan. 1905.

suitable method of estimating the fidelity and attainments of college students is, however, a problem which has long been under discussion, and has not yet received a satisfactory solution".

"Lectures alone are too often a useless expenditure of force. The lecturer pumps laboriously into sieves. The water may be wholesome but it runs through. A mind must work to grow"

— From Pres. Elliott's Inaugral Address, Oct. 19, 1869.

Vacaville, April 2, 1905

No. 2466. Live Oak (Wislizenii) Vacaville, Aragnipa Ranch, Alamo creek. Stamens 4, 5, 6. Pistils in axils in 2's, 3's or some in lower axils on a short spike and several fls. Pubescence in young growth stellate.

No. 2467. Quercus garryana Dougl. Valley Oak, on hillside, Aragnipa Hills, Pubescence straight, not stellate.

No. 2468. Sanicula bipinnata H. & A. Aromatic!

— Caucalis nodosa, taking the pastured hills! Aragnipa Ranch.
— Blue Oak, Blue cast due to bloom and greater now than later!

Vacaville, Apr. 2, 1905.

- Valley Oak - bark separated by deep narrow furrows into ridges which may be transversely broken into sporish plates.

- Came to Vacaville via Stockton and Sacramento. Foot hills at eastern side of Mt. Diablo thickly dotted with Live Oak. But southwards the hills are utterly barren - the mountains above them slightly wooded and (doubtless) yellow Pine scattered along the summits. Northeasterly base of Mt. Diablo with Valley Oaks in the little valleys receding in the hills from the plains. Valley Oaks practically the entire distance

Vacaville, Apr. 2. 1905

from Stockton to Sacramento but no fine trees. Elm type conspicuous where the soil is very sandy.

- "The wise man's mind is at the root of his tongue, the fool's ever dancing at the tip".- Italian Proverb

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- Trade Cat. Names.

Gray-leaf Pine = Pinus sabiniana
Mexican Piñon = " Torreyana

Germain's Cat. calls P. Torreyana "one of the most beautiful of our native Pines". Growth remarkable in Bot. Gard. at Berkeley. Terminal bud on Jan. 1, '05 nearly 1 ft. long. Digger Pine also fine in cultivation, does better in dry soils valleys than other pines.

Berkeley to Mission San

No. 2469. Sisyrinchium bellum Wats. Like forms at Berkeley but flowers rather larger and awl-like point at tip of perianth-segments conspicuous.

No. 2470. Vicia sativa. Banner light purple; wings dark purple, with slender hanging processes 1 line long; keel half as long as wing, joined (connate) to middle just below its hooded top to middle of wing. Wings shorter than banner. Very common on banks - Mission San Jose and Niles

No. 2471. Eschscholtzia californica Cham. Niles. One plant very brownish in foliage.

Jose, April 8, 1905.

Niles. 85 ft. alt.

No. 2472 Platanus racemosa Nutt. Trees 30 to 60 ft. high. Quantity in bed of Alameda Creek - the most abundant tree. Trunks 4 ft. diam at 1 or 2 ft.

- Acer macrophyllum, Terminal portion of raceme sterile. Inner half fertile. Alameda Creek. [Also same feature noted at Berkeley.]
- Black Cottonwood, Niles, trunk dead, checked, trees 40 ft. high. trunks 6 to 8 in. through
- Box Elder,
- Sycamore, young trees erect, older disposed to lean.

No. 2473. Populus trichocarpa T. & G. Niles, Alameda Creek bed. See note above.

No. 2474. Trifolium tridentatum Lindl. Niles Canon - Heads suggesting

Mission San Jose to

strawberries and called "Strawberry Clover" by one member of Botany 4.

No. 2475. Baccharis viminea. Bed of Alameda Creek.

– Dr. Willey, first President of the College of California tells me that Alphonse Wood was his teacher in botany at an Academy in Vermont and that when Wood was in California he was Willey's guest at this time in Berkeley. (This was about 35 years ago). Wood said that the cañon (Strawberry)

Niles Cañon Apr. 8, 1905

and surrounding hills formed the finest botanizing ground he had found in California.

– Mrs. F. H. Hasmer, Unitarian minister said: I think the book will not be suitable for me. It seems to go into too great detail. I noticed in the Hawthorns that he has 130 kinds. I started to go through them and finally when I got up to seventy I looked to the end to see how many there were!" He had borrowed for inspection my copy of Sargent's Trees of North America just out. – April 24, 1905.

Santa Rosa

– Head man in Santa Rosa Tanning Company says:– Great difference in water in tanning. Water at Freshwater in Humboldt Co., made nice white leather; soft spring water; did not need to bleach the leather at all. Well water here very hard, darkens the leather and scales up the boiler badly in a week. I now use the McDonald water. I started the tannery at Freshwater in 1887 with one or two other men. Moved here in 1892. I use bark from Occidental, Cloverdale, Healdsburg, Ukiah. The inland bark is much better than the coast bark.

May 11, 1905

The second-growth bark is not a 30 per cent tanner as against 60 per cent of old bark. But it makes just as good leather! (This point was fully emphasized by this man.) It comes from the same tree – is made in the same way by the tree. The second-growth is not so strong but the tannic acid is just as good. It takes more labor, of course, to handle twice as much bark, costs twice as much to grind it, etc.

Dewlbess had a tannery at Healdsburg before going to Arcata – has been at Arcata 30 years.

Santa Rosa

Kirby was a tanner at Santa Cruz. was there in early days. Made a leather with a fine reputation. Kirby leather was for a long time a standard. As good as Moffitt leather. an Eastern leather.

[I think he said 2013 Tanneries in Healdsburg in early days.]

It takes a cord of bark to tan 26 sides.

Pacific Coast tannage is the equal if not the superior of the Eastern tannage in heavy leathers - sole leather, saddle leather and harness leather. These leathers are heavy and

May 12, 1905

strong. Hemlock tanned leather hasn't the weight - it is like air. On the contrary Eastern light leathers walk all around the California product.

Calfskins etc are taken east, tanned and then sold to Californian shoe manufacturers.

On the other hand California tanners buy hides as far east as Kansas City and Chicago, tan them, and ship them east and sell them under the noses of the Eastern tanners.

The great quality of the Californian tanbark is

Santa Rosa

in giving the hide weight. The prices of hides is 11 or 12 cents. The profit must come from the increased weight. If a hide be chemically tanned as they are proposing to do in Los Angeles this will be nothing in it, as its weight tanned must pay for the tanning.

Tanbark fills the hide - Calif. bark - it can be done quickly as slowly, Thick liquors will fill it quickly as for soles but it is darker (and more brittle?). For

May 12, 1905

saddle leather and harness leather it is tanned slowly, maybe six months, fed as you would feed a baby, very gradually.

I paid $20 for bark this year; 22 in S.F. The war has made leather high and we will use anything to keep agoing. I have used hemlock extract in barrels from eastern U.S. but it is very unsatisfactory. I also use Mexican Bark - it is thin - and very rich in tannic acid - 80 percent - but it is curious that it does not make quite

Santa Rosa

as heavy a leather as the California tanbark. Leather can be filled by non-legitimate methods to weigh heavily - as with glucose.

There are 3 tanneries in Petaluma - each within 1000 yds of one another - each having different water and turning out different quality of leather.

The McBain tanning in Napa is a heavy hide tannery. The other tannery is a chemical tannery. There is a tannery in Benicia besides the Kullman Salz concern.

May 12, 1905.

I have had Live Oak(?) bark passed off on me with San Oak bark; it was very smooth bark. This was before I knew the difference in barks. No, I did not see any difference in the leathers."

Santa Rosa

Burbank's place is just over the creek flowing along the south side of Santa Rosa. The house stands on Santa Rosa ave. The place looks mighty neat and orderly. I should say there was about one acre in it. Of most things that he is interested in he has a great quantity of individuals. I saw first his plants of Kenchera micrantha – leaf variations – crested type he is working for – very very undulate with hairy and toothed margin. Is singular in its appearance. A bed of Tellima heterophylla shows flowers about ½ or perhaps ⅓ larger

– I am remembering 2487, the two sheets mentioned on p. 114 as follows:
no. 2487 c. Trifolium variegatum Nutt.
no. 2487 a. Trifolium appendiculatum Loja.

May 13, 1905.

Shows the best-sized flowers on wild plants. This and the previous case are selection experiments. He had Gilia grandiflora in good style. He is now much interested in spineless cacti. His poppy beds were most interesting. He has a bed of Eschscholtzia Californica that is red - a sort of crimson red. He began with a mere thread of red in one pl. of a plant. A bed of garden poppy hybrid seedlings showed extraordinary variations - 700 or 800 plants I suppose. The leaves were not only in themselves very different but their hues varied (some being strikingly glaucous, or light green, or

Santa Rosa

of a coarse dark green) and their pasture varied, there were flat or tending to be conduplicate, they were glabrous or semi-bristly, or so hairy as to look white fuzzing in the sun. Some looked like Sow. thistles, some looked like various Cruciferæ (rosettes of Arabis or Mustard), some were so much pinnately lobed and stood up as stiff as to suggest native species of Potentilla with pinnate leaves. I took a complete series of their seedlings, which were all of one set of hybrids. Another set were further along,

May 13, 1905

blooming more or less, 1 year old as I remember, and the leaves were even more strikingly different but chiefly from being larger. He had a huge hybrid poppy the most gorgeous thing I ever saw, a sort of glaring brick red with huge black glossy spots near the base. It is a product of two annuals neither of this color and this is perennial! The plants are now five years old - but produce no seeds in their pods! He is working on some native clovers - a lepto-phyllum thing that is striking - one leaf purple and the

Santa Rosa

others green, other species (native) - with 3, 4, 5 leaves. The light brick-red Wind Poppy he has and is working for 6 petals. He has some with 6 already. Brodiaea terrestris has white flowers. He has Gilia micrantha which looks normal or maybe a bit above size. He is working for size in Platystemon californicus. He had a lot of seedlings hybrid of Calif. Black & English Walnut with every variation in leaf - small leaflets, large leaflets, many leaflets, few leaflets. He has huge

May 13, 1905.

gorgeous Amaryllis - hybrids. He has tried to cross Godetia and Oenothera but hasn't succeeded. They are very close botanically - put into one genus by many - yet the physiological differences between Godetia and Oenothera, day-bloomer and evening bloomer are sufficent to keep them apart in breeding. I also saw the other things - spineless cactus, Camassia (big bulb - half as big as a man's head), and a lot of other things. I never was treated more kindly or considerately by any being than by Mr. Luther Burbank whose time is as precious as that of the busiest man.

Santa Rosa

- Temple Smith says Geo. Roeding is attempting to grow Tan Oak or native oak about Fresno by grafting
- Mr. Luther Burbank says charcoal is made from Madrona, Manzanita, and (Live Oak ?). He mentioned three. As to Tan Oak he says the bark is worth more for fuel than the wood, i.e. gives out more heat.

May 13, 1905.

Notes made on Santa Rosa Trip.

- Quercus agrifolia in continuous open groves for many many miles on S.W. slopes near San Ignacio as well as on N.E. slopes. Plenty good-sized trees on the hills, although the major part smaller than in the valley, often low and half shrub-like.
- Quercus lobata is in Marin Co. but the individuals are few and not in good form. To reach the best development the valleys must be hot and dry.

There is a fine grove, in very typical form, on the Ridgeway (Ridgefield ?) field place near Santa Rosa, just

Santa Rosa

outside town limits on north. There are other groves scattered over the valley and there is a cretinious belt on the west side of the valley. This is a rather marked belt and rather definite. The hills beyond it, south west, are quite barren. Nowhere in the Santa Rosa valley are the trees of the first size.

- The "Big Madrona on the hill near the railroad" is at Novato.

May 13, 1905.

Lumber Shipments, Mendocino Coast. for March, 1905.

Union Lumber Co	1,743,904
Caspar " " ...	1,728,725
Mendocino " "	1,666,436
Albion " "	1,445,771
L.E. White " "	1,410,168
Glen Blair " "	813,410
Empire Rdw. " "	594,975
Little Valley " "	197,213

Taken from the Mendocino Beacon, Apr. 22, 1905.

Residence of Judge A.L. Rhodes pioneer jurist of San Jose, on the Alameda, is the house brought around the horn by Commodore Stockton, in 1851 - acc. Sunset, May 1905, p. 75-

Redwood City

≡ Chas Beegar has a large tannery at Redwood City. Most of the tanners on the coast look to him as their best chemical tanner. I found him to be a young fellow, say 28, good looking, clear eyed, business like, fluent, logical in his thoughts and sticking clearly to the line of thought or argument and not running off into tangents at every thought or suggestion that came up.

He uses 1000 to 1200 cords of bark per year. He uses gambier as do all the tanneries in California. It is put into the hides last

May 13, 1905.

and gives them a plumpness which they would not otherwise have. His hides are first put into a lime water solution to soften them and loosen the hair and flesh. I was amazed at the amount of "flesh" which the hides bore. "Well," said Beegar, "the butchers are not careful about taking off the flesh clean. Why, should they be? They sell the hides for 11 or 12 cents a pound, which is more than they they get for their meat!" Then the hides go into very weak tanning solutions, and then into stronger, gradually working them up. They are finally put into a vat where they lie between

Redwood City

layers of ground bark. Lastly they are put into a gambier solution.

"Eastern hides are not as good as western hides say Beegar. The western hides are not taken off as well as eastern hides and they frequently bear brands but the hide itself is better; it is thicker and tougher. The skins of highly bred cattle are thin! More western cattle are of the coarse or wild stock.

Spent tan with us contains only 1½ per cent tannin. We leach it down until it is very thin. Now there are two objections to such thin liquer: its thinness and the residual matters or "dirt" in the last of

May 13, 1905.

the tan bark. The thinness is obviated by the evaporating pan, vacuum system, which condenses the liquer sufficiently (we do not condense it any more than we commonly use it-) and I think we also get rid at the same time of the deleterious qualities. We can't help but get rid of some of them."

Beegar showed me analyses of spent tan of various tanners, Krom, Wagner, himself, etc made about six years ago. The tannic acid (in some) ran as high as 6 per cent. That is altogether too much and tanners are evidently trying to devise means to save as much of the end of the tan bark as possible.

Redwood City

Beegar cannot use Canaigre. The reason is this: The tannin is there all right but there is so much starch that when you try to leech out the tannin, the starch swells and largely prevents it. The starch may too change into sugar (under heat?), fermentation begins and then there is trouble.

There is a compound of canaigre root, however, which I have here, sent me from the south, for boiler scale. It is the finest thing there is to prevent and take off scale - boiler scale.

In our leech tanks we run the heaviest liquors on to the fresh bark, then a less heavy liquor and so on, the

May 15, 1905.

clear hot water goes on to the last or nearly spent bark.

He has a mexican bark which has a high per cent tannin but which does not tan well.

Mould is a troublesome matter. If bark be rained on and mould starts you can't get it out of the bark - at least by an ordinary processes - and it may show in the leather.

For belting leather hides are tanned whole. For harness, saddle and sole leather the hide is cut into two pieces.

European tanners make a better leather than we do. They use a greater variety of tanning materials and use them in

Redwood City

combination, one kind of bark to give plumpness, another to give whiteness and so on. They carry their hides along further than we do — eight months. They use very weak liquors. They could take our spent bark of a few years ago and tan with it. They like take oak wood containing only 6 per cent tannin and tan with it — they do that right along. A tanner in Saär-bruchen in Saxony does that. There are fine forests in Saxony and exceedingly well managed. For every tree cut out a new one is planted. The foresters are college graduates"

May 15, 1905.

Gambier is some Indian tree of which they grind up the whole thing, extract the tannin and sock it as little cubes. The mexican bark above noted is an acacia probably. It is very thin and apparently hard to peel as it comes in small pieces. There is another tanning material from Asia Minor (or Spain ?) which is called Valbatina."

I saw at once from the sample that the pieces were acorn cups densely covered with large flattish murications. Some of the cups contained acorns. The murications were long, easily broken off, and appeared as a separate sample, the tannin percent

Redwood City

being much higher.

"The richest bark is the inland bark, or the southern bark. The bark near the coast is always much rougher than the bark inland."

- E.M. Wykoff says that the country on the easterly slope of the Santa Inez Range, going from Santa Barbara to Las Olivos has the finest Live Oaks in California and that it is a beautiful rolling country. — Neighborhood of Santa Inez Mission.

May 15, 1905.

On account of the Russo Japanese war they are turning everything possible into sole leather.

Berkeley, June 28, 1905

- Torrey Pine, Pinus Torreyana.

Seedling	in 1891	Grew 2ft. 8 in.	in 1898
Grew 10 inches	" 1892	" 4 " —	" 1899
" 6 "	" 1893	" 2 " 6 "	" 1900
" 11 "	" 1894	" 1 " 8 "	" 1901
" 20 "	" 1895	" 2 " 6 "	" 1902
" 7 "	" 1896	" 4 " — "	" 1903
" 11 "	" 1897	" 4 " — "	" 1904
		" 4 " 4 "	" 1905

Has been moved three times
The tree stands East side of path to Mechanics Bldg from North Hall.
It is 31 ft. high.

Measured on the above date by myself, assisted by Janitor Bishop. Data made up this day wholly, partly by estimation.

Lake Lagunitas

Marin Co.

-Big Madrona on south shore of east arm of lake, 22 ft. 1½ in. at 3 ft. above base at smallest part of trunk. The trunk is not symmetrical, broadens very much at base and parts into 6 main arms of 2 sets of 3 each, the 2 sets separated by a more distinct crotch. The crown spreads widely. The trunk is heavily buttressed. The crown is 100 ft.!! in longest diameter. It is 72 ft. high.

Another tree standing N. W. E of it is 13 ft 4½ inches at 3½ ft. from ground. It spreads at the base very much but has a much

May 17, 1905

more symmetrical bole. 60 ft. H.

Another tree standing 50 yds west is 15 ft. 4 in at 3¼ ft. from the ground. Does not swell so much at the ground as the others. 63 ft. high. Crowns of 2 last not especially broad. Dry rot in all, and especially in crown limbs (main branches) of first one.

Diameter, longest way, of first tree, at ground, 20 feet from tip to tip of buttresses!

A quarter-mile westwardly from the Keeper's cottage at the lake on the wagon trail to Bon Tempe ranch is another large

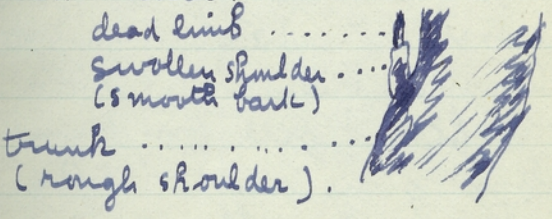
Lake Lagunitas

Madrona on the hillside. It measures 25 ft. 4 inches in circumference at the smallest part of the trunk, about 3½ feet from the ground. It has 4 great arms at 7 or 8 ft. from the ground; it has lost 3 large arms lower down; is hollow as seen from their broken arms but the trunk is otherwise perfect outside but is irregular on account of being heavily buttressed. The tape passed within 1 + 1½ ft. of the ground on the upper side — the tree being on a sloping hillside. It has a crown diameter of about 90 feet as stepped off by

May 17, 1905

Mr. B. C. Goldsmith, student in Botany 4, who accompanies me on today's trip.

The trees at Lagunitas were noticeable for the fine cylindrical shoulders which the trunks + main arms put out to close over rotten limbs.



Delightful flower-bestrewn hills about the lake — no cows! Quiet day, with the steady persistent call of the quail.

Lake Lagunitas,
Marin Co.

About 200 yds. further westerly is another huge Madrona, 22 ft 3 1/2 in. at 2 ft. but this three huge trunks are only joined at base to make this one trunk. - about 2 ft. above ground they part. The main branches are 2 1/4 to 4 ft. diam. 75 ft. diam. crown.
- Another tree 24 ft 5 1/2 in. at 4 ft. - great fire burned hollow on one side between the two forks - the crotch at 5 ft. - almost like 2 trees. This stands N.E. higher up hill from 2d tree mentioned previously. 90 ft. diam. crown

May 17, 1905

- Live Oak bark mottled gray in young trees
- Madrona bark scales usually parallelograms, - longer than broad.
- Douglas Spruce leaves live 8 + 9 years.
- Marin County - 1 sp. pine, Sonoma 4 pines, Napa three pines, Solano 1 pine.

- Ross Valley Oak - 14 ft. 2 in at 4 ft. + 75 ft. h.
= Quercus lobata, doubtless, but had a query in my mind at time.

- Lythrum californicum, sent by R. J. Smith, May, 1905 - Petals 6, stamens 6! Spm. in U.C. Herb.

Marin Co -

Lake Lagunitas. May 17, '05

(Tautology!)

No. 2476. Valley Oak. Lagunitas

No. 2477. Garry Oak. With preced.

No. 2478. Orthocarpus (looks like yellow-fl O. densiflorus).

No. 2479. Orthocarpus faucibarbatus very rank open in cold with fasciated spikes.

No. 2480 Streptanthus secundus, Greene; on shaly slide, private road to Lagunitas.

No. 2480A Garry Oak. Lagunitas towards Bon Tempe Ranch.

No. 2480B. Valley Oak, with preced.

No. 2480C. Yellowish fl. Orthocarpus [=O. densiflorus Benth.] Lake Lagunitas.

No. 2480D. Lythrum Hyssopifolia. perennial probably. = L. acutangulus Greene if perennial.

- Redwood in hills ½ m / mile N. of San Rafael on N.-slope

Berkeley, May 23, 1905.

- A visitor came to me this morning with leaves and flowers of Maianthemum bifolium var. dilatatum from Oregon. He is using them "with great success" on a highly inflammed leg of 19 mos standing with remarkable results. His Treatment with these leaves is recent. He applies the leaves directly, chopped fine and steamed, fresh every day. He says in the northern woods (Oregon) burns and cuts are cured by this plant. A man had a very severe burn on the side of his foot, could get no sleep except by opiates, etc - one time after application of leaves he went to sleep. Indians eat the leaves every spring. The whites call the plant "Indian Lettuce" and also "Coltsfoot". He says

Berkeley, May 23, 1905.

it grows wherever the Spruce grows- always find it about the foot of the tree. For a period he was without a stock of leaves and when the wound was washed the odor of the leaves came out each day, particularly after rubbing. For the application makes the flesh itch! He said also that the leaves caused the gaping wound to close up and that the broad scar is not nearly so broad and is gradually closing. The man's name is F. W. Kronenberg, 1518 Minturn st., Alameda, of S. F. office of Boston Woven Hose and Rubber Co.

May 24, 1905.

- Mr. Waller Y. Kellogg of California Door Company says: Port Orford Cedar said to be getting scarce. Price suddenly raised a few years ago. All the accessible timber about Coos Bay taken out. Is used always for lining linen and clothes chests. When inside wooden blinds were fashionable it was put into blinds. Highly adapted for that purpose. It does not "work" after seasoning, that is, it does not warp or twist or season-check

Yellow Pine and Sugar Pine marketed mixed under the trade name "White Pine" to Eastern dealers.

The famous room at the Shepherd House, Dwight & College, Berkeley, is the sapwood of the Yellow Pine. It is exceedingly white and satiny.

Redwood doors have long had a

Berkeley, May 24, 1905.

good market in Guatamala because not eaten by white ants.

- Capt. Selfridge, Calif. Northwestern Cal mill at Willits says: "We sell our waste at Ukiah at $1.50 per cord. It is (4½) ft. length. They sell Tan Oak wood as stumpage at $1.25 per cord. (It costs $3.00 to put it on the cars.)" They have sold it on the cars at $4.00 per cord. The freight to Tiburon is $2.25 a cord. Their cord-wood waste is dumped from above onto flat cars with racks.

Berkeley to Willits, May 25, '05

1400 ft.

- Plenty Cottonwood (Fremonti) in cañon between Cloverdale and Ukiah along railroad.
- Digger Pine abundant on the wooded hills at Preston and northward.
- Young rare-form types of Valley Oak very leafy on main branches and trunk. Weeping form in fronts of cañons in hills.
- Buckeye in flower near Preston! (near Cloverdale). Full
- Valley Oak, young trees with straight axis erect for 15 or 20 ft. before branching or with very strict branches.
- No. 2481. Tritolium tridentatum [Tindl.] type. Fls. a beautiful crimson-purple, the wings shaded with dark blotch and white tips, but keel very much

Willits, 1400 ft.

Mendocino Co.

Shorter. Valley at Willits.

No. 2482. Trifolium, small-headed, purple fls. low flats at Willits. In same square foot as next. T. variegatum Nutt.

No. 2483. Trifolium. Large headed, crimson fls. with large white tips. T. appendiculatum Loja. cf. no. 2487.

No. 2484. trifolium olivaceum Greene. Fls. small & dark purple; tip of banner light blu, of wings white. Railroad embankment. ~~Trifolium albopurpureum T. & G.~~

No. 2485. Allocarya, flats at Willits. A. ~~californica~~ gracilis Greene.

May 25, 1905.

- Oregon Ash, trunk bark brown, fissured into narrow interlaced ridges the lin. about 50 feet high, 2 ft. diam. Valley flat.
- Orthocarpus Nutt. on the low flats!
- Orthocarpus laciniatus, Gray. coloring the meadow flats!! Very abundant & rank! The yellow fl. sp with the sacs deeper than high.

No. 2486 Lasthenia.

Rays minute. Heads lemon yellow at first (in anthesis), later the yellow rays turn white and surround the flowers whose styles are conspicuously crown purple. Corollas mostly 4-lobed. Low flats at Willits.

Willits, 1400 ft.

See p 79.

No. 2487. Trifolium. 2 sheets. Plants matted together and looking alike. Required special pains to separate them at roots. Fls. alike - but slight difference in involucres and flatness of foliage. T. variegatum Nutt.

The very big flowered one (2483) is very noticeable and there does not seem to be any intermediate sizes. It may be just as long stemmed as the other.

No. 2488. Ranunculus R. orthorhynchus var. platyphyllus (maximus Greene.)
No. 2489 R. occidentalis " californicus var. alceus Jepson
} Fl. lots at Willits
Both 5 petals

No. 2490. Downingia*. Fls pale blue with dimple-pointed white

* D. pulchella Torr.

May 25, 1905.

spot on cream lower lip. Upper lips reserving. Anther-tube curved or hooked. Fls. showing a disposition to turn pinkish.

Water pools - water gone

No. 2491. Gratiola ebracteata Bth.
Stamens 2 only!
In water pools - water gone.

No. 2492. Cornus californica C. A. Mey. 4 or 5 ft. h.
Petals ovate, acute, white; the inflorescence very hairy.

No. 2493. Ceanothus integerrimus var. californicus (Kell.), Benson
Shrub, 8 ft. high, broader than high, rounded outline, & massed with white blossoms, a great soft pillowy thing, looking like cotton woven

Willits, 1400 ft.

to resemble silk. But it is difficult to convey the effect of this great white bald. Certainly it presented a more delicate and dainty and maybe showier appearance than Ceanothus Parryi which I have regarded as the showiest of Californian Ceanothi and well nigh the most handsome of Californian shrubs when seen in fine form. This shrub was on a creek bank about 200 yards north of the Hotel Willits.

Madrona trunks 5 to 6 feet in diameter near or at the ground are not uncommon.

Mendocino Co.

May 25, 1905

- Willits is a new town growing up in the woods and rather "backwoodsy" in its new dwellings but there are some tasteful places and the place is a bustling one.

2494a = Agoseris heterophylla = same loc. as 2494.

No. 2494. Agoseris. Flowers lemon yellow, ½ in. across. Open ground. Willits

No. 2495. Sidalcea diplosecyphia Gray. Some fls with dark (purple) center, most with light-col. center. Styles 8! Open ground.

No. 2496. Linanthus bicolor Gilia. Open ground. Very glaucous or grayish herbage. G. bicolor (Nutt.).

No. 2497. Linanthus bicolor Gilia (Open ground. acicularis (Greene).

No. 2498. Grass. californica var. Danthonia americana Scribn.

Mendocino Co.

Willits, 1400 ft.

No. 2499. Lotus micranthus Bth. Open ground.

No. 2499a. Orthocarpus lithospermoides Benth.

No. 2500 Chinquapin. Young tree 12 ft high. Bark gray-mottled & smooth Old trunks brown. One tree 16¼ ft. circ at 4 ft. and 75 ft high.

No. 2501. Eschscholtzia Lemon yellow or light orange. Rank plants in open, but one young plant taken. California Cham. var. Crocea Jeps.

No. 2502 Clarkia purpurea ssp. quadrivulnera ~~Godetia~~. Ranker plants not taken, not in fl., 1½ times height of these. Stigma purple. Corolla both solid lilac-crimson or light purple ~~and on~~ another plant splotched with dark purple.

No. 2503. Mimulus Guttatus DC. Det A.L.G. Mimulus Langdorfii. Corolla "light-orange" yellow,

May 26, 1905.

brown dots on palate.

No. 2504. Trifolium (smells like freshly cut waterm.) dry ground.

No. 2505. Sidalcea diploscypha Gray. Purple centers all fls.!

No. 2506 Sidalcea. White or whitish centres in all the fls! I see no other dif. in the two forms. No sexual difs that I can see as to length styles, etc (8 styles!)

The Tan Oak is taken out of the wood 2 years ahead of logging of the Redwood to save the Tan Oak wood. There are no roads in the woods except wagon roads and it would not pay to put in rails

Willits

for the Tan Oak wood, as long as Selfridge. It was not clear to me why it could not be done as the rails eventually go in anyway. It is his idea that fire does no injury - does not hurt Redwood. As to Tan Oak - well it sticks the bark and you have to wait 6 or 7 years before it will peel again.

They cut Douglas Fir as "pine" simply.

Their furnace fires are fed with wet Redwood chopped very fine. They have plenty of steam and run a motor which supplies Willits with lights by night and furnishes power for their

May 26, 1905.

planing mill by day.

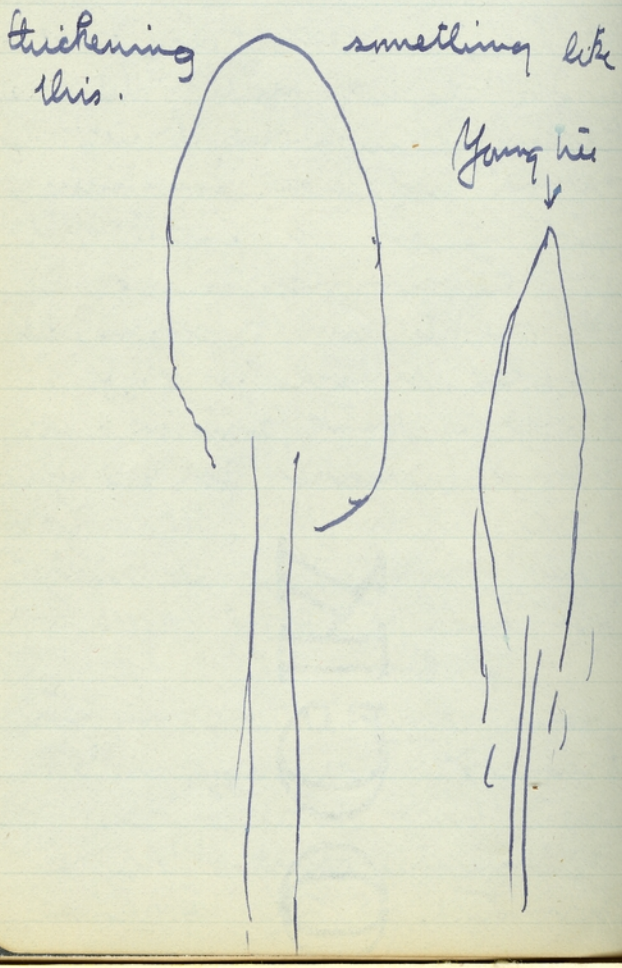
They do not mill the giant Chinquapin - cut it into 4 ft. wood and sold for fuel. There is only a little of it in the woods.

One tree now before me at Hawley school is 85 ft. h., 2½ ft in trunk diam at 4 ft., clear of branches for 45 ft. straight as the arrow from the bow. There is another tree near it about same h. 3½ ft. diam at 4 ft.

Crown narrow; in young tree branches ascending, in old tree horizontal.

* Branches short. Old tree roundish at top, the crown

Willits



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- Yellow Pine, branches ascending in top, horizontal below, in old trees swerving outward and downward, upper horizontal, becoming flattened in top or distorted or broken, or uppermost also drooping. Lowest frequently leg-pendulous about stumps.
- Redwood, limbs horizontal, the lower drooping, very top seems commonly to die and then the flat top results.
- Douglas Spruce, old trees limbs horizontal as with lower limbs curving down and outward.
- Black Oak, bark black, checked in oblong rectangles.

Willits to Ukiah

- Valley Oak, young trees 7 to 15 ft. erect. Trees 25 to 35 with top of erect main branches and lower part with a few short branches which serve to protect stump.

Something like that.

Next distinct stage: working the last stage, self-pollarded tree

May 26, 1905

with crown of erect branches.

- A daily paper contains the following:- In certain spectroscopic work it is necessary to use a concave mirror engraved with parallel lines so fine that there are sometimes nearly 100,000 to the inch. Professor Rowland of Johns Hopkins invented a machine for engraving such lines. This machine contained a screw with a thread of fineness never before known, ground under water by a process known only to Rowland and his head mechanic. The latter died and Rowland started to teach another man but died before he had imparted all the steps of the process. Attempts to complete the process are unsuccessful.

- Sap of Redwood 2 to 4 inches as seen on the refuse slabs from Northwestern Co's Mill.
- Met F.M. Anderson on train at Willits. Asks what is "Redwood Lily."? not a tiger lily. From his suggestions I hazard that it is "Veratrum fimbriatum". The

Ukiah

c. 600 ft.

name is, of course, a folk name. Says a tourist at Laytonville asked him about cedars in California, true cedars. Anderson said there were no true cedars, when the tourist triumphantly rejoined: "Ah, yes, at Monterey. And they grow at two other places in the world, in Palestine and at ——. (Anderson could not remember the other place cited) And they told us so at the Hotel del Monte! And they showed them to us on the 17-mile drive!" *

*= Cupressus macrocarpa!

May 27, 1905.

- Fritillaria coccinea & recurva both in Eden Valley, on dif. soils, dif. size bulbs, dif. color schemes, coccinea but a variation of the other. = Carl Purdy
- Valley Oak, great full-headed tree, very symmetrical & round & full of branches, no excessively heavy parts, all youthful, altho char. tortuous, 95 ft. high near Asylum Road, 50 yds. across Bridge from Ukiah. Then in opposition tall trees 115 ft. high with the crown all broken off on the sides so as to make a tall but narrow crown, old but Lear-like & with, too, a beauty of to own

Mendocino Co

Ukiah

c. 600 ft.

No. 2507. Lupinus formosus Greene; Flats near Talmage. Lilac purple to white & shades between.

No. 2508. Grass. Mill Creek, open hills. "Came in 25 yrs. ago and crowded out Barley grass" - Earl Purdy. Stock will not eat it dry! No good summer feed!

No. 2508a. Streptanthus glandulosus Hook.

- Earl Purdy says: A fine Valley Oak between Kelseyville and Indian Mission.

Burning of the chaparral makes trees grow acc. Purdy, i.e. they have a chance to rise out of brush stage.

- Camassia Leichtlinii, petals twisting, bon-bon-like, above the pod after flowering. Camassia esculenta, petals falling away! Flower of first either white or blue? Purdy's garden.

May 27, 1905

- Earl Purdy says: Fritillaria lanceolata has solid bulb; biflora, recurva, coccinea have scaly bulbs.
- Considerable Knob-cone Pine in spot in this range. More it is burned the more it there is, that is if the burning do not come oftener than the period for cone formation, 6 to 8 years.
- Calochortus amoenus, color form of albus purely, yet always distinct! former always Sierran, (latter always Coast Range?). - C.P.
- Calochortus amabilis not south of Bay, pulchellus on every side of Diablo. - C.P.
- Alders (Alnus rhombifolia) in Mill Creek Canon, 115 feet high!!

Purdy's Garden

- Brodiaea candida, differs from laxa, chiefly in that the pedicel is abruptly turned or bent at summit.
Kern & Tulare countries = Purdy's Garden
-
Calocohortus ~~albus~~ pulchellus like albus in shape and position of its petals. Pulchellus hairy above gland with scattered hairs but not at tip. Gland like amabalis except that the hairs covering gland are more regularly set in pulchellus. Pulchellus and amabilis are practically alike except in set of petals. Petals in pulchellus cross over each other.
- Lilium Humboldtii, leaves affected by limestone, turn whitish

May 28, 1905

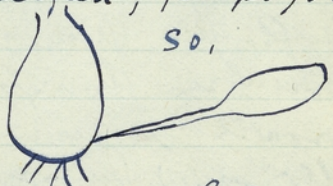
L.
Pardalinum, not affected.
- Erythronium grandiflorum, leaves solid green, only species not having mottled leaves.-
- Fritillaria lanceolata bulbs live just one year acc. Purdy.
- No. 2509. Live Oak, Ukiah Valley
Photo of round ball of tree
620 ft. alt. No 11 of spool 1.
- No. 2510. Live Oak. The tree with the very broad trunk, high top, irregular but big, measured previously & thought to be wislizenii!!
65 or 70 ft R. agrifolia but =

Purdy's Garden

- Garry Oak, young trees full of dead leaves with fresh full-grown leaves above them, young trees 10 to 18 ft. high. Old trees clean of old leaves.
- No Yellow Pine in Wayacamas Range acc. Purdy.
- No Digger Pine in Ukiah valley to Willits region. None on road to Purdy's place.
- Psoralea macrostachya its roots very tough, very hard to clear from the land, as tough as hemp rope, says Purdy. Always grows in rich spots but does it not, being leguminous, make the land rich? Roots used by the Indians for fibre.

May 29, 1905

- Quercus Wislizenii scrub, very shallow rooted, easy to clear from land. Adenostoma fascic. roots run down between the cleavages in sandstone in the most remarkable way. The thin fibrous roots will eventually spread out between layers of rock 5 or 6 ft deep like India ink tracings.
- Brodiaea coccinea, propogates by offsets so.



the only Brodiaea which does this. Erythronium Hartwegi is the only Erythronium which has offsets. — acc. Purdy.

Purdy's Garden

- Ceanothus integerrimus, at Purdy's ranch, same as in Sierras I think and so does he. White, cream, bluish-tinted, pink-tinted, all side by side and undoubtedly the same and the same as my specimens collected at Willits!
- Black Oak has grown up into poles 30 to 35 ft. high and 15 to 18 years old, nearly 2 ft. per year growth. Fire has run through the older growth at least three times, the older trunks are fire-hollowed and show three successive woods!
- No Quercus agrifolia that I can find in Ukiah Valley.

May 29, 1905.

- Group of Sambucus glauca, in field s.w. of Insane Asylum, 25-30 ft. high, with large trunks (1 ft. diam. at least). Bark with narrow ridges forming an openly braided network. Trunks showing a disposition to rot at the ground, the trees in 2 case felled cleanly at very ground in that way.

Berkeley to the

- Left Berkeley on the Santa Fe on the evening of July 4. A very warm and disagreeable day. The next morning breakfasted at Bakersfield. Southerly from this place is a prominent mountain - "Bear Peak". Pines on top. These mountains rise higher than the true Coast Ranges - a very decided difference is observable from the train in the general altitudes of the two regions. Southwest of Bakersfield on the valley floor there is a rich belt which appears extensive. Willows and Populus Fremonti galore in the foothill washes. Opuntia species, near Pampa, lots of it, ½ to 1 ft. high. Station of

Mojave Desert, July 4 - 5, 1905.

Plenty Digger Pine at highest elevations on both sides of loop. Caliente is a freighting station. Rough little wagon village, almost savage looking. Valley Oak and Blue Oak and Live Oak noticed. Valley Oak, rather fine trees for the region, noticed 4 or 5 miles from (back; northerly) Tehachapi station. Tehachapi is quite a town. Orderly brick blocks, etc.

Yucca brevifolia

First noticed Tree Yuccas (4 to 15 ft. h.) beyond Cameron. Form thin forest. Leaves turn down when the plants are 3 ft. high. The matter of time, etc of reflexion of leaves needs study in the field. Do not

Mojave Desert

agree with Sargent. Yucca-Trees very abundant in all the valley-like mesas, Mohave to Rich to Kramer ("Lodgings at Kramer"). Trees to be seen on one side of track if not on the other. Just beyond Mohave a great trackless stretch of sand devoid of all vegetation, on left-hand side of track. Species may be different from that first seen this morning but there are Yucca arborescens, Joshua Tree, undoubtedly. They stand on the mesas, sometimes as far as one can see. They are mostly 10 to 15 feet high, and 1 foot in diameter.

July 5, 1905

One notices one here and there of exceptional size, 20 ft. high, and 15 feet across the crown, the trunk 1½ feet in diameter.

The route of the railroad, is, as I understand it, essentially that followed by Fremont when he passed out of the head of the San Joaquin in the glorious spring time with his strange company of soldiers, hunters, guides and indians. At Barstow we strike the Mohave River, flowing across the desert sands from its source on the northerly slopes of the San Bernardino Mountains. There it flows easterly, disappearing in the burning desert half-way

Colorado River to

to the Colorado River. Its bed from Barstow to Daggett, as far as we follow it, is well filled with Populus Fremonti, but the trees remarkably low. Other trees, willows with them, but I could not distinguish what they were.

There were no more Yuccas, since leaving Daggett, except near the Colorado at Goffs where a very few low ones (1 to 4 ft. high) were seen; leaves apparently broader and perhaps a different species.

Vegetation on the whole thin, the woody growth all of it very low. Great dark green areas of Larrea.

Williams, Arizona, July 6

At the Needles were Indians in very picturesque array selling beads and trinkets to the passengers. It was exceedingly hot all the way across the desert but there was a charm about the awful desert nuts, which is not to be easily effaced from the memory. The railroad seemed to follow a natural valley all the way across, with bare ranges, vegetation - naked mountains, many colored, built yesterday, and eroded by cloud-bursts into curious forms. Passing the Needles we ascended the Northern Arizona plateau where it became cooler. At

Grand Cañon of

thin forest of Yellow Pine appeared as we viewed the landscape near Williams the next morning. Forced to wait until late in the afternoon for a train for Grand Cañon, which was reached just in time to see the evening effects. Met one of my former students, Miss Florence Ewing here. The Grand Cañon is a thing unique, terrible, inspiring yet ghastly, orderly yet disorderly - no words can compass it, there is nothing with which to make comparisons. All the various layers or strata down to the granite (a long ways down) are perfectly

Colorado River, July 7, '05

horizontal. The river, running through the great earth cleft, has played its part in erosion but the whole thing is not erosion plainly for there are box cañons where no water has come down, at least in appreciable quantity. The pyramid temple effects are the pictures most deeply impressive. Their bases suggest masonry. There is sometimes a sort of regularity about the pyramids that suggests law and order, especially where noting the recurrence of strata from one pyramid like to another. But there is disorder too and a

Grand Canon of the

vastness and depth to the hole which is infernal, positively and devilishly infernal. The sides of the canon slope back from its walls, so that no water runs into the canon here, but away from it. The other side of the canon is said to be 2000 feet higher than this side. It is about 20 miles to the nearest point on the other side. I forget the depth of the infernal thing, say 6000 feet. The canon is therefore the last top of a mountain which has split longitudinally. The plateau is covered by a a thin forest called the

Colorado River, July 7, 1905.

"Coconongo Forest" This forest is in Coconongo County and stretches away for 60 or 70 miles in a broad belt. It is thin and has little soil on this plateau to support it. The chief trees are Pinus edulis and Juniperus occidentalis. The former is 8 to 20 feet high, 1/2 to 1 1/2 feet trunk diameter; the latter scraggy, mostly 5 to 10 feet high, some 15 feet. h., usually many-stemmed. Berries blue with a white bloom which brushes off very readily.

Pinus Jonderosa seems more abundant after leaving Williams - towards Bellemont. The engine

Albuquerque, N. Mex.

emitted an extravagant display of sparks - the like of which I never saw before - setting fire in numerous places to the grass along the tracks. The coal particles were so large and so hot that a fire would blaze up before my car got past - I could watch it start into a blaze and gain headway. Later I noticed logs burning in the forest down everywhere along the track!

Albuquerque is on the Rio Grande and is a good-sized city. It has several banks and business blocks. Fred Harvey, the king

July 8, 1905.

of the Santa Fe eating houses has built a hotel here which is a beautiful and very comfortable mission structure. It has also, in connection, an Indian Building where is displayed the largest sale collection of Navahoe blankets, Indian baskets and handiwork which I ever saw. He has also built a Hopi village reproduction near the El Tovar at Grand Canon, full of Navahoe blankets for sale and other things as well, all for sale. The El Tovar is admirably built, logs of Yellow Pine entering largely into its construction - bits will into

Albuquerque, N. Mex.

the country on account of being built low. Between Williams and Albuquerque the grand mountain sight is snow-covered San Francisco Peak! Near Trinidad, Colorado, saw the Spanish Peaks. Across Kansas to Kansas city, then to Chicago. Dreadfully muddy and dirty in Chicago. Went out to the University of Chicago and saw Coulter with whom I had a few pleasant minutes talk. The buildings of Rockefeller University are a dream. To Pittsburg, Harrisburg, Philadelphia, New York - suffering eastern heat which I could

to New York, July 8-12, '05

never stand on account of the humidity. Went out to the New York Botanical Garden. They have a large range of hot houses with many fine things. Their Museum Building is four stories, 2 main stories, basement and top floor. All but the top floor is mainly devoted to exhibition and general educational purposes. Saw Dr. Howe, who is at the moment swamped with editorial cares, having not only his own Torreya on his hands but also in the absence of Barnhart and others the Bulletin of the Torrey Club and something else, the Memoirs I think he said.

New York

- McDougal did a considerable part of the honors in showing me about and was very kind. He has a lot of mutants that he thinks more distinct than De Vries' things. His are Oenotheras "biennis" variants as I would say. Anyway they do not seem to me "much stuck." However, for physiological work doubtless they are as of as much value as if "abundantly distinct." McDougal has an Oenothera grandiflora plant - genuine thing direct from original locality - somewhere down Florida way, he says - which in facies is distinct enough from anything we have in California.

July 13, 1905

- Howe seemed to be happy. He lives rather near the Botanical Gardens and with him is Le Roy Abrams, formerly of Stanford University, and the man who succeeded Schneider at Chicago - and a Canadian whose name, neither, did I get clear. Howe had a little to say about Greene: The various segments of Catholic clergy say as complimentary things of each other as do the denominations of Protestantism. After Greene went out of the Catholic University he said frankly to Howe: One can't have a University with a lot of Catholic priests running it." Tidestrom

New York

is now in Washington, doing some sort of botanical work in the seed-testing division.

It is and has been sizzling hot in New York — the detestable humid heat from which there is no escape. It is worse than all the terrors of the Spanish Inquisition. Everyone seems to be "hot." Policemen, if asked a question, are surly or impudent. The poorer classes, crowded into tenements must suffer indeed. Why do they not leave the crowded cities and take up their life in the country where there is so much room? Howe said he

July 14, 1905

talked of the beauties of the country to an old woman who listened patiently and then said: "Young man, all that you say may be true, but I'd rather be a lamp post on the Bowery than a Cedar in Lebanon"!

Howe asked politely about Professor Setchell. I replied that he was well and happy and that he came back from his trip abroad ~~fat~~ not at all fatigued or travel-worn in appearance. "No," said Howe, "I hear that he is corpulent. Richards on his way to Japan said Setchell looked like an old woman eight months gone with twins!"

Setchell himself would enjoy that!

New York to Antwerp, July, 1905.

– Sailed from New York on the Red Star liner Vaterland for Antwerp. Pleasant passage. Then after a short visit in Belgium I went to London.

On a beautiful day we steamed up the River Scheld, with the low-lying fields protected from the sea by dykes and diversified with long lines of Lombardy poplars, red-tiled farm houses and innumerable small patches of cultivated ground laid off just so. ~~The Cathe~~ And so on to Antwerp where we landed. Antwerp is interesting for its churches, galleries and street scenes. The Cathedral is said to be the finest gothic

church in the Netherlands. Here too is the Musee Plantin, a printing house dating back to 1500 something. It has been in the possession of one family all that period but is now a public museum, filled with priceless old books, old engravings, old copper plates, rubrics, type, ancient printing presses, left with their complement of tools as if work were to be resumed tomorrow, old proof-sheets, etc. Of the portraits in the building 15 are by Rubens. I great like them much better than his religious masterpieces which travelers from all parts of the world come to see.

London, England

Miscellaneous Memoranda.

-Thuya gigantea, R. Brown in Trans. Bot. Soc. Edin. 9; 338. "The bamboo" of the N.W. Indians; bark woven into mats, the figures made by staining strips with a mixture of oil, charcoal and water. Teared bark woven into blankets and cloaks. Lodges made of the easily split wood. Trunks hollowed for their ordinary canoes and even their huge war-canoes. Twigs are so tough as to be used to bind together or to sew together the pieces of a canoe or hold-boards of a lodge in place. The leaves are a substitute for tobacco in times of tobacco famine. (wood very durable in contact with soil. Hudson Bay Co's forts made of it. E.C.,)

On. p. 378, Brown has an article entitled, "On the Vegetable Products used

August, 1905.

by the northwest Indians as Food and Medicine, in the American arts and in superstitious Rites. He questions Douglas' statement that the Indians eat the roots of Lupinus littoralis; they eat the roots of Arenaria (Abronia) growing with L. littoralis at mouth of Columbia.

Heracleum lanatum - roots and young stems eaten by some of the coast tribes

Pinus contorta, liber eaten in times of scarcity.

Pyrus rivularis, wrapt in leaves and preserved in bags all winter. When the apples have become sweet, cooked by being put in a hole in the ground, with leaves and a layer of earth and a fire kindled over them.

Pinus monticola - long wooden spoons.

Rubus Nutkanus - tender spring shoots as well as berries.

Acer macrophyllum - paddles of the wood. Also gambling disks and sticks.

London, England

Cont.-

- Acer circinatum, for making bowls.
- Cupressus Nootkaensis, bowls, and boxes made from a single piece.
- Taxus brevifolia, "fighting wood" in various languages, bows. Much grows near Mt. Shasta in California and among the Oregon Indians a bow of "Shasta Yew" is as much prized, as in Europe used to be a coat of "Milan steel" or a "Toledo blade".
- Pinus contorta, so full of resin used for torches in spearing salmon at night.
- Philadelphus Lewisii and Gordonianus, leaves used as substitute for soap.
- Chlorogalum pomeridianum, bulb similarly used; its fibres used by native Californians in making saddle-mats.
- Urtica gracilis, fishing net made of its fibre valued by an Indian at $100.00

August, 1905.

Cont:-

- He also refers to a hemp and quotes an article from the S.F. Bulletin describing its use and occurence. The wild geese of the Sacramento plenis were caught by nets made of it, assisted by decoys (This paper was presented, May, (1868)
- Trillium ovatum - roots used as poultice.
- Megarrhiza Oregana, Torr, infusion of the huge roots, put in little ponds in the woods, to stupify deer come to drink, and thus fall an easier prey to the Indians. Said at S.F. to form the principal ingredient in "Stoughton's Bitters". - All the above from Robert Brown's notes.

- Men's best successes come after their disappointments - H. W. Beecher.

London, England

- Murray on Calif. Trees, Proc. Edin. Bot. Soc. 6, 350 et seq.

Pinus insignis, used as street planking, S.F., in preference to Oregon lumber, very resinous and stands wear and tear.

Pinus Jeffreyi, collected by Jeffrey in Shasta Valley. Also found in Scots Valley (by others).

- Gairdner, Meredith, M.D Cf. Britten, Bibliog. Index. Carum Gairdneri (Hook. & Arn.) Gray.

- Trans. Bot. Soc. Edin. 6, records the gift of a spm of Scirpus lacustris from California, 15 feet long.

August, 1905.

- Taxodium distichum: - The periodical streams seem to disappear at the moment the rains themselves cease. x x x x fortunately the Mexican Flora mostly has furnished a guide to places where there is always a good supply, by planting on the banks of the streams Sabino-trees (Taxodium distichum, Rich) to inform the weary traveler, when he descries their high waving tops, that the object of his search is close at hand." - Seeman, Bot. Herald, p. 263.

- Dates of Publication.

Fl. Bor. Am. Cf. Bull. Herb. Boiss. '93, p. 298
Bot. Beech. Cf. Journ. Bot. '93, p. 298
Torr. & Gr. Fl. N. Am. - Do -

London

Miller's Dictionary of English Plant Names
- Abies – Deal-tree. [Cf "Deal-tables"]
- Abronia umbellata. Purple Sand-Verbena
- Acacia armata. Kangaroo Thorn.
- Acer circinatum. Round-leaved Maple.
- Achillea Millefolium – Hundred-leaved grass. [Thousand-Seal.
- Achlys triphylla. Oregon May Apple.
- Adenocarpus. Gland-pod.
- Ammi. Bishop's Weed. majus, Common.
- Ammophila arenaria. Sea-Matweed.
- Amorpha. False Indigo.
- Antennaria. Mountain Cud-weed, Mt. Cotton-weed, Mt. Everlasting.
- Anthemis Cotula. Dog-fennel! (Stinking May-weed)
- Araucaria Bidwillii. Bunya-Bunya Pine.
- Arbutus Menziesii, Menzies' Strawberry Tree.
- Aster – Star-wort
- Astragalus. Milk-Vetch.
- Atriplex patula. Common or Delt Orache
- Atriplex – Orache. Useful to apply to section of salt-marsh species.

August, 1905.

Azalea – "false honeyuckle".
Baccharis – Ploughman's Spikenard.
Baccharis pilularis = "Chapparral Broom", W.L.J.
Boerhaavia. Hog-weed { Erecta. American H. / Scandens. Climbing H.
Callitriche. Water Starwort. Star-grass
Camelina sativa. Gold-of-pleasure.
Cartthamus lanatus! Distaff Thistle.
Carum Gairdneri. "Indian Ground-Nut", W.L.J. Correct p. 504 of Fl.
Ceanothus. Mountain Sweet. Blue Bush. [Red Root
- C. cordulatus. Calif. Snow Bush.
- C. papillous. Pimpled Blue Bush
- C. spinosus. Redwood of Santa Barbara.
- C. thyrsiflorus. Calif. Lilac. "Chapparal Redw." W.L.J.
- C. dentatus. Tooth-leaved Red Root.
- C. integerrimus. Beauty of the Sierras

Chenopodium rubrum, Red Goosefoot. Sow-bane, Swine-bane. The other sp. in my Fl. correspond.
Eriodictyon Californicum, Tar Bush.
Fremontia Californica. "Slippery Elm"
Geranium dissectum, Australian Geranium.
Hakea. Wooden-cherry
Heuchera micrantha. Small-fl. Alum Root

London, England.

Lactuca virosa Sleep-wort.
Lamium amplexicaule. Lion's Snap.
Lithaspermum. Gromwell
Lupinus arboreus Tree Lupine
L. densiflorus. Californian Sheep Poison
Madaria corymbosa & elegans. Migonette-Vine
Martynia proboscidea. Elephant's Trunk. Unicorn Plant.
Medicago maculata. Heart Clover.
Echinocystis fabacea. Bitter-root.
Menyanthes trifoliata. Bog-Nut Bog-Bean.
Mesembryanthemum aequilaterale. Australian Pigs-faces.
Mimulus cardinalis. Cardinal Monkey flower.
Mimulus moschatus. Musk-plant.
Mimulus guttatus. Spotted Monkey-flower.
Monardella. "Mustang Mint" (W.L.J.)
Montia fontana. "Blinks" Water Chickweed.
Mirabilis multiflora. Many-fl Marvel of Peru.
Myosurus minimus. Blood Strange.
Nymphaea odorata. Three-col. (or Stripe-fl) Water Lily.

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Pachystima. Mountain Lover.
Pentstemon confertus. Whorled Pentstemon.
Philadelphus. Mock-Orange.
Pittosporum crassifolium. Parchment-bark.
" Eugenioides. New Zeal. Hedge Laurel.
" undulatum. White-Box of N.S.W.
Podocarpus. Plum Fir.
Polygala. Milk-Wort.
Polygonum acre. Water Smart-weed.
P. convolvulus. Bear-bind. Corn-bind.
P. aviculare. Armstrong. Iron-grass. Beggar-weed. Door-weed of N.Am.
P. Bistorta. Bistort. Gentle Dock. Patience Dock. Red-legs.
P. Persicaria. Red Shanks. Peach-wort. Crabs Claw.
P. lapathifolifolium. Pale-fl. Knotweed. Willow-weed.
Portulaca oleracea. Garden Purslane.
Potamogeton crispus. Curly Pondweed.
P. natans. Devil's Spoons. Tench Weed. Water Caltrops.
P. gramineus. Grass-leaved Pondweed.
P. praelongus. Long Pondweed.
P. densus. Frog's Lettuce
Potentilla fruticosa. Shrubby Cinquefoil
tridentata. Three-toothed "
(Pot. of this habit and leaf-type are called Cinquefoils.)

London, England

Brunella vulgaris, Herb Carpenter.

Prosopis pubescens. Tornillo Bean.

Pyrola rotundifolia. Canker-Lettuce
P. elliptica Am. Shin-leaf.
P. maculata. Spotted Wintergreen.

Quercus Brewsri. Chaparral Oak
Q. lobata. Sacramento White Oak.
Wislizenii var. frutescens. "Desert Oak"

Ranunculus Flammula. Small Spear-wort.
Spear wort is subgeneric for Buttercups with this type of leaf.

Rhamnus Californica. Californian Coffee-tree
[Better Coffee-Bush?]

Ribes bracteosum. Californian Black Currant.
R. tenuiflorum. Slender-fl. Black Currant.
R. sanguineum. Red-fl. Currant.

Rumex salicifolius. White Dock.
R. hymenosepalus "Wild Pie-plant"

Senecio Mikanioides. German Ivy.

Sida Indian Mallow.

Statice. Sea-Lavender

Suaeda "Alkali-Blite" - wh. fl.
Torreyana.

Verbascum Thapsus. Aaron's Rod. Adam's Flannel
Verbena hastata. Blue Vervain. Simpler's Joy.
Viburnum ellipticum, Arrow-wood of Calif -
Vicia gigantea [Giant Vetch wh. fl.]
Xanthium strumarium. Ditch Bur.
Zauschneria Californica. Californian Fuchsia.

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Zizyphus Jujube Tree.

London

- Trees of California. In Trans. Bot. Soc. Edinburgh, v.b, p 210 and p. 330, Mr. Andrew Murray has two papers, data chiefly from his brother Mr. William Murray in S.F., Two expeds. sent after Abies bracteata seed, Mr. Beardsley first, Mr. William Reebles second who drew the picture for the plate. Both failed in getting seed in quantity. (August is the right month - W.L.J.) [John?] Miers of Monterey was their guide. Beardsley in 1856 went over the Santa Lucias from Mission San Antonio to the trees by the worst trail he had ever traveled in this or any other country, for "the mountains here are as steep as the laws of gravity will admit."

They are steep, for I found them so, but the trail I went over, while rough, pleased me for its romantic wildness. Cf. L.C. vol. 6, p. 215. Beardsley coll. about Monterey.

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David Douglas.

- London's Gardener's Magazine, 18; 289, The Monument in Memory of ~~David~~ the Botanist Douglas; containing, 1. Report of the Committee; 2. Engraving and Description of the Monument, with a copy of the Inscriptions; and 3. List of the Subscribers. (Also portrait of Douglas). About 650 subscribers, £181, 5, 10 - chiefly from gardeners in small (o.s.) amounts, showing it was a patriotic undertaking. (1842)
- L.C. 12; 602. Biographical Notice of the late Mr. David Douglas, F.L.S, the Traveler and Botanist; with a Proposal to erect a Monument to his Memory; and a list of the plants which he introduced. (1836)

British Museum (Bot.)

"Fruits of Cucurbitaceae and Crescentiaceae, as the original models of various clay, glass, metallic, and other hollow and tubular instruments employed in the arts. No tribe yielded so many different hollow vessels as the Gourds on account of their wide distribution, diversity of form of fruits, easy rejection of pulp, capability of being moulded while growing. Convenient to include here the Calabash Trees. Next to the hollow horn of mammalia, the gourd (inc. the Cucurbitaceae and Calabashes) yields greatest variety of vessels. Gourds used for drinking cups, musical instrument in India, sucking bottle, Calabash gourd will float a man, etc. Gourd = prototype of 3 hollow vessels: 1. Long-necked bottle with egg-shaped body, imitated in clay by Chinese, Hindoos, Egyptians, Peruvians. 2. Hour-glass gourd, used by Pilgrims and Orientals. 3. Cupping-glass. Latin name = cucurbitula cruenta. Cupping with gourds common in western Africa. Earliest vacuum producers. Bronze "cucurbitula" are found in Pompeii ruins". Proc. Edin. Bot. Soc. 6; 304.

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≡ Nuttall, Thos. Plants coll. in Calif.
Sanicula Menziesii! Santa Barbara, in fl!

= Flowering period. Well to indicate it but in Preface to Flora should explain that "Apr-June" say covers the period of the flowering throughout the state and not in a single spot ~~in~~ locality where the flowering may pass in a few days. =

British Museum (Bot.)

= Re Thos. Coulter. "Notes on Upper California" in Journ. Roy. Geog. Soc. 5, The matter descriptive of the fertile parts of California and of the social condition of the Indians, produce of fruits, etc on pp. 65, 66, 67 interesting - not quoted by Coville.

It is doubtless the fact that Coulter did not come to California or return to Mexico by land, but by sea, making a journey from Monterey to the ford of the Colorado near the Gila and returning to Monterey by essentially the same route. This is implied by Coville but the implication is rather obscure.

Although Coulter maps the Tule Lakes he distinctly says

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that he did not visit them, procuring his information from hunters and a priest who had traveled thither. He also says that he was not "to the north of San Francisco". By this he means San Francisco Bay as may be inferred from the use of the term elsewhere. But he may have meant Mission San Francisco Solano, marked on his map as "San Francisco" and which Douglas visited. Coulter may have accompanied Douglas.

Coulter

= In Proc. Roy. Irish. Acad. 2; 553, Dr. John Thomas Romney Robinson furnishes the memorial biography: He begins thus: It is an old saying that science has its martyrs as

well as religion; we may add that it has its forlorn hope as well as war, urged to the adventure by loftier and nobler impulses, encountering in its pursuit an even greater amount of suffering and danger; but too often unnoticed and unrewarded. Its heroism is of too high an order to be appreciated by vulgar minds; the wise and good who alone value it are comparatively few and powerless, and the triumphs which it achieves are not in unison with the evil tendencies and passions which unhappily predominate among mankind"

Born near Dundalk, Ireland, 1793, left an orphan at an early age, he was cared for by a good and intelli-

gent uncle. Devoted to field sports and out-of-door life "Bees were another favorite object; and he possessed that remarkable power of handling these irritable insects with impunity, which attracted so much notice in Wildman and others. He had in after life the same privilege as to serpents; of which some members may recollect an amusing exhibition in this room; his secret being the union of gentleness and courage." Studied with DeCandolle at Geneva, after having graduated from Dublin Univ, where he published his Memoir on the Dipsaceae (1823). Went to Mexico in 1824, engaging as medical attendant at the Real de Monte Mining Co. for

British Museum (Bot.)

3 years. Circumstances induced him to take charge of one of the company's mines. In his hands it now became productive. While such work was new to him yet he was well fortified in Physics and Chemistry by his University training. His original plans for America were, however, wholly for natural science, and after his engagement terminated he turned his attention wholly to collecting: in Mexico and California. He was highly adapted for the life, Robinson's econium being reproduced by Coville

He collected Cacti for DeCandolle nearly all being new species. "His Herbarium (including the Mexican

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and Californian plants), contains about 150,000 specimens." – Robinson. It became the property of Trinity College, Dublin and he its Curator. Died at Dublin, 1843. [Member Roy. Irish Academy, Dublin].

= Robinson, Rev. Dr. John Thomas Romney. Physicist, Astronomer and Author, inventor of the ordinary cup wind-gauge, and most intimate friend of Thos. Coulter. Romneya Coulteri Harv.

= Fremont. Expedition to California. The numbers of his specimens run as high as 354 (1846) as shown on a spm. of Hosackia ~~crassifolia~~ bicolor. – Kew Hb. Jan. 1906.

Kew Herbarium

Miscellaneous Memoranda.

= Sanicula, use of terms "head" and "umbrellet" in my flora. Cf. allied genera.

= Sanicula tuberosa! Fall Brook, Me.

= Abies. Use "Silver Fir" Jones, A.M. in Tree Book to better set off Pseudotsuga, "Douglas Fir." or Black Firs.

= Mustard Plant of the Scriptures; Brassica nigra. Cf. Lambert. Trans. Linn. Soc. 17; 449.

= Godetia purpurea — I find no specimen of Menzies in Kew Hb. or in British Museum.

- Eriogonum Davidsonii Greene, Pitt. 2; 295. In Kew Hb. copy sumen has indicated in pencil, = E. molestum. [But this was taken from Erratum!]

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- Godetia, Spach, Hist. des Veget. 4; 386 (1835).

"Nous dedions ce genre a M. Charles Godet, de Neufchatel en Suisse, botaniste et entomologiste très-distingué, dont les découvertes ont enrichi la science de beaucoup d'espèces nouvelles du Caucase."

= Vasey, Geo. Botanized on Smith Mt., San Diego Co., teste label on Horkelia oblongifolia, Kew Hb.

= Greene sent his plants for det. (from New Mexico) to Asa Gray as late as 1880 as appears from label in ~~Gray~~ Kew Hb., the plant cumm. by Gray

---

= When "Gray's Letters" appeared, after Gray's death, it was clear from Mrs. Gray's preface that Gray had not preserved the letters of his correspondents. It could not appear then how much Greene was indebted to Gray. I remember Greene's remarking the first fact I have mentioned.

Kew Herbarium

Miscellaneous Memoranda

- J.R. Vasey, collected in Contra Costa county, San Antonio River (Monterey Co), 1880. Also San Diego Co. Cuyamaca Mts. San Bernardino Mts.
- C.G. Pringle, collected in Calif. in 1882 (. Very robust spm. of Eryngium ~~Vasey~~ armatum!! "moist plains. Mendocino, Aug. 5, 1882".). Bractlets very stout, 10 lines long, as much as 2 lines broad, entire or some with a small tooth at the middle.
- Eryngium Hansenii n sp. Pine Grove, 2300 ft., Amador County, Hansen, June, 1892. Plants ½ to 1 ft. high. Leaves as described by Coulter & Rose, Monog, p. 57. Heads with stout entire bayonet-like bract~~lets~~ similar to armatum, but an outer circle only, those

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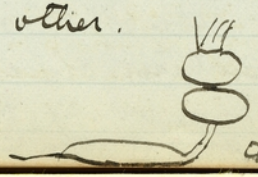
of armatum passing regularly into the gradually shorter bractlets which decrease toward the center. Armatum's head as in Pringle's plant above cited is a star-like rosette.
- Eryngium Parishii as represented by Brandegee's San Diego spm, n. 1628 in Baker's set of 1903 distribution, coll. 1902, has small heads, the very slender spinose bracts twice the length of the head, the bractlets ~~not exceeding~~ similar but few. Baker's 1827 Elvizo, Santa Clara Co. is the same, all the bracts and bractlet not quite as long.
- ~~Ligusticum~~, Selinum (calif. spp.) rearranged by C. & R. in Sphenosciadium, Conioselinum, doubtless good. Gray in letter to Bentham objects to Selinum & Ligusticum merely, favoring Conioselinum (~~as not all in~~ Ligusticum

Kew Herbarium

and Selinum to be distinct on vittal) or (2) refer all C.- to L.- or (3) combine all under L.-
: Letter to Bentham. In another letter to Bentham he says "I still insist that Cynapium apiifolium is a good Arracacia, And I have another with shorter fruit: A. Bolanderi."

- Peucedanum ambiguum - stem from a globose tuber-like root, the slender root or roots below producing often globose tubers at intervals or sometimes fusiform ones. Sometimes (as in Brodiaea capitata) one globose portion formed immediately below the other.



So, the lower portion turned to one side to get in here!

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- Peucedanum utriculatum Nutt. Bractlets variable in size and shape, usually acute. Part of Hansen's n. 1297, Agric. Stat. Amador, 2000 ft. shows laciniate bractlets longer than the umbellets. The membranaceous utricles average about 1 in. l. in material here at Hb. Kew. Wings a trifle wider than body in Hansen's. Root usually thick taproot. Stems often numerously branched from near base. Sometimes caespitose.

- Lobb, W. Coll. in Oregon, in 1852 per Herb Label.

- Peucedanum utriculatum det. E.L.G. C.F. Baker "Mt. St. Helena, about rocky summits, no 2621, Apr. 20, 1903," fruit nearly mature; oil tubes 6 on face, 1 in the intervals with 2 small accessory ones. Ultimate divisions pinnatifid rather than dissected, the segments oblong, acute, 1 or 2 mm. l. Fruit 6 mm. broad + 12 mm. long. Pet. inf!

Not utric. or at most 2 var!

British Museum

- Menzies, Archibald. Name appears in Steele's Navy List, May, 1796, p. 34. under the year 1790, the year of his First Warrant, by which he is entitled to half-pay as a Surgeon in his Majesties Fleets. Surgeons Pay: "5 l. per month, besides 2d per man per month for the whole Complement of Men from the time of their appearance aboard, agreeably to their warrant"

London Horticultural Society
Oct. 16, 1905.

-Quercus Garryana. MSS of Douglas. full descrip. tree in which he comments on hard tought texture of its wood in combination with durability, qualities rarely combined ~~coob~~ in same species of American oak. wood in green state splits freely and regularly, makes excellent barrel staves; seasoned wood very hard to work. Common on the low alluvial banks of the Columbia not more than 200 miles from the ocean. Plentiful on north bank 60 mi from ocean (Captain Vancouver's "Oak Point") 1792. Does not form thick woods, scattered in an open manner along tributaries of the larger streams forming tells or clumps. Acorns greedily sought by Bears. "By several of the native tribes they are gathered in the months of August and September and deposited in pits on the margins of Lakes or Streams so that they are completely covred by water in which state they lay till the following when they are taken out and without any other preparation than simply wiping they are eaten as an article of food. The shell is disagreeable and as might be expected is far from being a palatable flavor."

The above occurs with a monograph on the East American oaks written by Douglas and drawn up from his collections and observations made on a journey to New York in the service of this Society.

-Peucedanum Donnellii — Cf. my Coos Valley Ridge plant - lower end of Valley with above species *

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* The two have almost nothing in common - at least as to any close relation ship. — W.L.J., March, 1933.

Oct. 14, 1905.

Kew, England.

Old English Proverbs :-

A fat kitchen makes a lean will.
Let scandal alone and it will die away of itself.
Despise trifling affronts and they will vanish.
A little method is worth a great deal of memory.
Wherever the speech is corrupted so is the mind.
Every oak must be an acorn.
Willows are weak yet they bind other wood.
A word fitly spoken is like apples of gold in pictures of silver.
A blithe heart makes a blooming visage.
Reprove thy friend privately, commend him publicly.
He is in the way to be wise who can bear reproof.
Advise not what is most pleasant but what is most useful.
Be always at leisure to do good.
We never know the worth of water till the well is dry.
The stone that lies not in your way need not offend you.
Quiet persons are welcome everywhere.
It is hard for an empty bag to stand upright.

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Frankness is the sign of a noble mind.
Write with the learned but speak with the vulgar.
Work ill done must be twice done.
Write injuries in dust, kindnesses in marble.
Love thy neighbor but pull not down thy hedge.
Good breeding is benevolence in trifles.
He who foresees calamities suffers them twice over.
Disparage and depreciate no one.
Enemies always tell you the truth, friends rarely.
Men are pleased with a jester but never esteem him.
When a friend asks there should be no tomorrow.
Keep out of a hasty man's way for a while.
A well bred man is always social and complaisant.
The greatest liars cannot bear that others should lie.
Of all virtues, Zeno made choice of silence.
In the morning think well of what you have to do.
A good cause makes a courageous heart.
Nothing violent is of long continuance.
Have but one counsellor of a thousand.

p732

Kew Herbarium

– Collecting; types are often old or scrappy pieces, often when fair specimens they are not characteristic of the usual or prevailing form. So in collecting it is important to do more than make a handsome spm. of the robust form; one should break off bits of old stems, old fls., old seed pods, also bits of young stages, lower leaves; collect also dwarf plants. This is highly important apart from matching types.

Jan. 1906.

Douglas – Plants coll. in California
Peucedanum parvifolium, macrocarpum, carnifolia (type).

Subjects for Students

= Changes in shapes of leaves on the one plant during development.
= Study of Vicia gigantea, its habits, etc. Germination of its seeds.
= Leaves, endurance, time of appearing, succession of forms, etc. Leaves of seedlings.
= Orthocarpus pusillus, its history, habits, parasitism, etc.

Vacaville, Aug. 29, 1904.

Soil Samples.

No. 1. at 1½ ft. dark loam — Surface to 1¾ ft.

No. 2. at 3½ ft, clayish 1¾ ft to 3¾ ft.

No. 3. at 5½ ft. adobe (black) 3¾ — down to 5½ and below apparently.

(Stem 4, 1 ft diam.) from common ~~stump~~ stump at ground.

Bark black, ~~finely~~ checked into small plates, plates mostly ½ in. across + 1 or 2 in long.

No 11 Next p

Books Wanted.

- Contributions to N. Am. Ethnology, Vol. 3, 1877, Stephen Powers, Tribes of California
- Death Valley, John R. Spears, in Globe Library, Rand McNally.
- Van Dyke, The Desert.
- Anthology of Parodies + of Nonsense.
-

Camera Record

Spool I. - 1. Pure stand of Douglas Oak, Howell Mt. June 3, 1903.
10 to 18 ft. high.
4 + 5, Madrons, Lagunitas
6. Valley Oak, 5 ft. diam 65 ft. h. " 7. Do. Young tree 1½ ft diam 38 ft. h
8, 8, 9. Valley Oak, Willits, 80 ft. h + 6 ft. diam. breast high.
10. Valley Oak, young 1 ft. diam at ground + 32 ft. h
11. Live Oak, 30 ft high, Wishylini; 3 stumps from common base
12. Valley Oak, 40 ft. h., 14 in diam at ground.

Spool 2. 1. Valley Oak, 45 ft. h, 15 in at ground.
8. Young Valley Oak - 14 ft. high.
No. 9. ~~10~~. Valley Oak, 115 feet h + 6 feet diameter.
No. 10. 120 feet high

Addresses.

- Arthur Stanley Pease, 10 Perkins Hall, Cambridge, friend of Mr. Wm. Kellogg, for whom I named coll. of Monterey plants = (Oct. 5, 1904.) Invites me to call.
- Mr. Biggens, Redlands, big cattle man, fruit-grower, etc. attended Farmers' Institute.
- Mr. Krause, Honolulu, formerly propogator in greenhouses.
- Mr. David T. Hanbury, Palace Hotel, S. F. (London, W. Orleans Club) wrote about Potamog. pect. + Italian Ray-grass.
- Clyde A. Payne, Ashland, Oregon, S. Oregon State Norm. School. Sent Boschniakia and Lewisia Howellii.
- Mr. Deane, assoc. of Maiden, see p. preced.
- Hotel Gerard, 122 West 44th st., New York ("Room + use of bath, $1.00 a day + up).

Addresses of Californians

- Lee Wilson, Elmira
- Harbison, Vacaville.
- Clay Blake, Vacaville (wants Tree Book)
- Geo. Sharpe, Vacaville.
- A. L. Brown (Sierra Lumber Co) Red Bluff sent Camass Plant, "poisons horses"
- Sara Wedd Palmer, Redlands.
- Alice King, College City, California
- Argyle Baker, 1414 Calif. S.F. via Carl Crystal
- Miss Edna Wemple, 960 Bush, S.F.
- O. B. Cromwell, Cygnus station, S.P. Co. - Knows about duck fords.
- Dr. Amy J. Bowen, Pres. Sempervirens Club, 1425 California st. S.F.
- Mrs. Chas. W. Moores, Cor. Sec. Sempervirens Club, 1518 Larkin st., S.F.
- Temple Smith, Bookseller, Santa Rosa
- Reynolds (U.C.), Santa Rosa Press-Democrat
- J. Elmer Mobley, City Editor, Santa Rosa Republican.

Addresses of S. Californians

- Harriette W. Smith, Anaheim High School.
- M. F. Gilman, Banning. (Forest Ranger)
- C

Addresses.

- Capt. Selfridge, Calif. North W. Mill & Lumber Co.
- Hammond, member of the Herbarium Committee of Harvard University, presented me by Sir Dietrich Brandis; paper-maker, has been at this for 50 years I think he said. - Jan. 31, 1906, Kew.

Expenses, European Trip. July 4-25 1905

Steamer ticket	55.00
S.F. to N. York	61.25
Suit case	4.50
Pullman to Williams	2.25
Breakfast Bakersfield	.40
Trunk + suit case, exp.	.65
Street car	.05
Oranges	.10
Supper, Needles	.30
Breakf. Williams	.25
Plums, "	.20
Supper, Grand Cañ	.55
Breakf. " "	.30
Dinner, " "	.35
Pullman, Will. to Alb.	1.50
Stage at Grand C.	1.00
Pullman Albq. to Chicago	4.25
Dining Car	.50
Meals, Albqe.	1.50
Meals " to Chicago	.80
Chicago, Hotel	1.00
Meals	.40
Fruit	.25
Pittsburg	.30
Chicago Fares	.26
N.Y. transfer bag	1.00
Fares	.15
Meals	.40
"	.30
"	.30
"	.20
Lemons	.10
Roll ups	3.75
Cups	2.50
Stamps	.20
" + Post Cards	.10
Hotel Albert	3.00
Fares	.40
Steamer chair	1.00
Passport	3.50
Tie, New York	.39
Collar, " "	.25
Tip to waiter Vadal.	.80

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